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(NASA-CR-144591) AN INVESTIGATION OF THE
0.0091 SCALE EXTERNAL TANK OGIVE NOSE (MSFC
MODEL 470)- IN THE MSFC 14 INCH TWT TO
DETERMINE THE PRESSURE DISTRIBUTION AROUND
THE EXTERNAL TANK NOSE (TA3F); VOLUME 2

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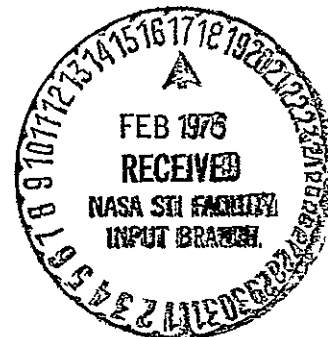
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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA Management services

SPACE DIVISION



CHRYSLER
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VOLUME 2 OF 2

AN INVESTIGATION OF THE $Q_{0.0091}$ SCALE EXTERNAL
TANK OGIVE NOSE (MSFC MODEL 470) IN THE
MSFC 14 INCH TWT TO DETERMINE THE PRESSURE
DISTRIBUTION AROUND THE EXTERNAL
TANK NOSE (TA3F)

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National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number: MSFC TWT 609
NASA Series No.: TA3F
Model Number: 470
Test Dates: September 26 - October 11, 1974

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TANK OGIVE NOSE (MSFC MODEL 470) IN THE
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Paul E. Ramsey*, G. W. Winkler**, T. C. Davis**

ABSTRACT

A wind tunnel pressure test of the Space Shuttle External Tank Nose, TWT 609, was conducted in the MSFC 14" by 14" trisonic wind tunnel during October of 1974. The model was a 0.0091 scale representation of the ogive nose section of the External Tank with nose cap and lightning rod and protuberances. The designation MSFC model #470 has been assigned to the model and its support hardware. The NASA test series number is TA3F. The primary purpose of the test was to determine the pressure distribution around the nose cap. Pressure data were also obtained along the ogive nose.

Data were obtained over an angle of attack range of ± 5 degrees and over a Mach number range of .6 to 4.96. The Reynolds number per unit length (ft.) ranged from 4.1×10^6 to 4.96×10^6 . There were 22 pressure ports in a single row. Circumferential positions of 0, 22.5, 45, 67.5 and 90 degrees were simulated by rotating the model. The LO_2 feed line and LO_2 recirculation line were simulated. The effects of the nose spike were investigated over a range of Mach numbers.

* MSFC

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PLOTTED COEFFICIENTS SCHEDULE:

(A) CP VERSUS THETA

(B) CP VERSUS X/L

NOMENCLATURE
General

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>	<u>UNITS</u>
C_p	CP	pressure coefficient; $(p_1 - p_\infty)/q_\infty$	
ET	.	External Tank	
l_B	LBODY	length of the ET	in.
M	.	Mach number	
P_1		local pressure	psi
P_t		total pressure	psi
P_∞		freestream pressure	psi
q_∞	Q(PSI)	freestream dynamic pressure unit	psi
R_N/L	RN/L	Reynolds number per unit length	
T_t		freestream total temperature ($^{\circ}\text{F}$)	deg.
X		distance from nose of Tank model in the negative X_m direction	in.
X_T, Y_T, Z_T		tank stations; (see Figure 1)	in.
X/l_B	\dot{X}/L	longitudinal location of pressure measurement, expressed as a fraction of the ET length, measured from the ET nose	

GREEK SYMBOLS

α	ALPHA	angle of attack	deg.
ϕ	PHI	angle of roll	deg.
θ	THETA	circumferential location	deg.

SUBSCRIPTS.

ref	reference conditions
∞	freestream conditions

NOMENCLATURE (Concluded)

<u>SYMBOL</u>	<u>PLOT SYMBOL</u>	<u>DEFINITION</u>
o		orbiter
t		total conditions
T		external tank
m		missile axis system
l		local

INTRODUCTION

The Space Shuttle External Tank as defined by reference drawing VL78-000062B (see Figure 2) has a 610-inch radius ogive nose with a nose cap and lightning rod. This nose cap contains the vent valves for the ET LO₂ tank. In order to perform analytical venting analyses it is desirable to know the pressure distribution around the vent as accurately as possible. A pressure test was thus conducted to determine the pressure distribution around the ET nose cap. Pressure taps were also located on the ogive to give the entire distribution of pressures around the nose.

The ET model included the forward ogive nose section, the nose cap and lightning rod, the LO₂ feed line and LO₂ recirculation line protuberances, and a short portion of the ET cylindrical body. The aft end of the model corresponded to tank station, $X_T = 923.54$. Model scale is .0091. This model size gave a tunnel blockage of 3.6%.

Local pressure data were obtained for Mach numbers of .6, .8, .9, 1.2, 1.46, 1.96, and 4.96. The angle of attach range was from -5 to +5 degrees in 1 degree increments. Additional runs were made at Mach numbers of 1.96, 3.0, 4.0 and 4.96 and angles of attach of 0 degrees and +10 degrees. Table I gives tunnel flow conditions for the test Mach numbers. A run schedule is shown in Table II. Runs were made with and without the lightning rod.

MODEL AND SUPPORT HARDWARE

The ET pressure model, MSFC model #470, was a .0091-scale representation of the ogive nose and forward section of the ET. Only that portion of the ET forward of full scale X_T station 923.54 was modeled. This gave a total model length (including lightning rod) of 5.681 inches. Model diameter was 3.000 inches. Figures 5 and 6 show installation photographs of the model.

There were twenty-two, .032 inch O.D. pressure ports located on the nose cap and ogive. Seven ports were on the nose cap, five on the upper surface. Two ports were located on the lower surface because of a lack of space on the upper surface. The remaining ports were distributed along the length of the ogive nose with some corresponding to ports located on past ET models. The model and associated pressure ports can be seen in Figure 3. Table IV gives the port number along with the X and X/l_B position. The two ports on the lower side of the nose cap are numbered 2 and 4.

The external protuberances that are located on the ogive nose (see Figure 2) were also modeled. The protuberances are the LO_2 feed-line and LO_2 recirculation line combined. Model drawings of the protuberances are shown in Figure 4.

In order to obtain data for circumferential pressure distributions in the first quadrant of the nose, the model was rotated but the nose protuberance was held in the same position relative to the wind tunnel. Since the pressure distribution was required every 22.5 degrees, holes were drilled and tapped in the model every 22.5 degrees from the initial

MODEL AND SUPPORT HARDWARE (Concluded)

position of the protuberance ($\theta=0$ degrees to a point 90 degrees away). The direction of rotation of the model was clockwise when viewing it from the rear. This did not simulate vehicle roll but gave the pressure distribution at 0 degrees roll angle. Because of the lower two ports, the protuberance was also placed in the third quadrant and the model rotated as noted above. By determining the proper combinations of protuberance location and angle of attack, the data from the two lower ports were combined with that from the remaining upper ports to obtain one complete set of data.

The model was supported by a .875-inch diameter sting that was built integral with the model. The sting is shown in the model drawing of Figure 3. Sting deflections were considered negligible because of the relatively large sting diameter, the small angle of attack range, and the relatively small normal forces the model encountered.

INSTRUMENTATION

Eight scanivalves equipped with 50 psia pressure transducers were required to monitor the 22 pressure ports on the ET model. The location of these ports and corresponding tubes by number are shown in Table IV. Table V shows the correlation between port number and scanivalve position. Port numbers were labeled with a tag on each tube.

In addition to configuration photographs, flow visualization photographs (shadowgraphs) were made at 0, 5, and 10 degrees angle of attack. These runs are noted by a /9 in the run schedule of Table II.A. Two of these photographs (with and without spike at $M = 1.96$ and $\alpha = 5^\circ$) are shown in Figures 7 and 8.

CONFIGURATIONS INVESTIGATED

Two configurations were investigated during the test. They consisted of the external tank nose alone and with the lightning rod nose spike. Model dimensional data is shown in Table III.

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14" x 14" Trisonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.85 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50, and the supersonic section permits testing at Mach 2.74 through 5.85. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and perforated walls. Mach numbers of 1.44, 1.93 and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks are tilted and translated automatically to produce any desired Mach number in .25 increments.

Air is supplied to a 6000 cubic foot storage tank at approximately -40°F dew point and 500 psi. The compressor is a three-stage reciprocating unit driven by a 1500 hp motor.

The tunnel flow is established and controlled with a servo-actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 180°F. The air then passes through the test section which contains the nozzle blocks and test region.

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle-of-attack range of 20° (+10°). Sting offsets are available for obtaining various maximum angles of attack up to 25°.

TEST FACILITY DESCRIPTION (Concluded)

The diffuser section has movable floor and ceiling panels which are the primary means of controlling the subsonic Mach numbers and permit more efficient running supersonically. The sector assembly and supersonic diffuser telescope into the subsonic diffuser to allow easy access to the model and test section.

Tunnel flow is exhausted through an acoustically damped tower to atmosphere or into the vacuum field of 42,000 cubic feet. The vacuum tanks are evacuated by vacuum pumps driven by electric motors rated at a total of 500 hp.

Data are recorded by a solid-state digital data acquisition system. The digital data are transferred to punched cards during the run to be reduced later by a computer to proper coefficient form.

DATA REDUCTION

A set of twenty-two static pressure measurements were recorded on each run. The pressure data was then reduced to coefficient form with the following equation:

$$C_p = (P_1 - P_\infty)/q_\infty$$

A separate computer program was written to collate the pressure data from ports 2 and 4 with the pressure data of other ports. The resultant data plots show a continuous pressure distribution for each longitudinal and circumferential location. The data listed for a circumferential location of 0 degrees and at -5 degrees angle of attack will contain values for ports 2 and 4 taken from data at a circumferential location of 180 degrees and -5 degrees angle of attack. The relocation of data for ports 2 and 4 are made at the same Mach numbers, angles of attack, and roll angles.

Plots of the pressure coefficients versus both longitudinal station (C_p vs. X/l_B) and circumferential location (C_p vs. θ) are presented for each of the Mach numbers, angles of attack, and roll angles. Tabulated data of the pressure coefficients, longitudinal stations, and their circumferential locations are presented in the Appendix.

REFERENCES

Reports

1. NASA TMX-53185, "The George C. Marshall Space Flight Center's 14 x 14 Inch Trisonic Wind Tunnel Technical Handbook", Simon Erwin; December 1964.
2. NSI-M-9230-74-270, "A Pre-test Report for MSFC TWT 596, An Investigation to Determine the Static Pressure Distributions During Reentry of a 0.003-scale Modified MCR 200 Space Shuttle External Tank Model in the NASA-MSFC 14 x 14 Inch Trisonic Wind Tunnel", Robertson, M. K. and Winkler, G. W., April 1974.

Drawings

1. VL78-000062 "B", 2-7-74; Thermal, Lightning Field and Aerodynamic Model - 330.2 Diameter External Tank - Shuttle Study; Rockwell International.

TABLE I.

[illegible]

Table II.A.

TEST: TWT 609		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE :						
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)									
		α	β	Θ	Φ				.6	.8	.9	1.2	1.46	1.96	4.96			
RIG 001	ET NOSE	-5	0°	0°	0°			7	604	593	582	571	285	186	2			
002		-4						7	605	594	583	572	286	187	3			
003		-3						7	606	595	584	573	287	188	4			
004		-2						7	607	596	585	574	288	189	5			
005		-1						7	608	597	586	575	289	190	6			
006		0						7	609	598	587	576	290	191	7			
007		1						7	610	599	588	577	291	192	8			
008		2						7	611	600	589	578	292	193	9			
009		3						7	612	601	590	579	293	194	10			
010		4						7	613	602	591	580	294	195	11			
011		5		▼				7	614	603	592	581	295	196	12			
012		-5		22.5				7	615	626	637	648	274	197	20			
013		-4						7	616	627	638	649	275	198	21			
014		-3						7	617	628	639	650	276	199	22			
015		-2						7	618	629	640	651	277	200	23			
016		-1						7	619	630	641	652	278	201	24			
017		0						7	620	631	642	653	279	202	25			
▼ 018	▼	1	▼	▼	▼			7	621	632	643	654	280	203	26			
1 7 13 19 25 31 37 43 49 55 61 67 75 76																		
CP																		
		COEFFICENTS										IDVAR (1)		IDVAR (2)		NDV		
α OR β																		
SCHEDULES																		

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TEST RUN NUMBERS

TABLE II.A. (Continued)

TEST: TWT 609		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE:					
DATA SET IDENTIFIER	CONFIGURATION	SCHD		PARAMETERS/VALUES				NO OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)								
		α	β	Θ	ϕ				.6	.8	.9	1.20	1.46	1.96	4.96		
RIG 019	ET NOSE	2	0	22.5	0°			7	622	633	644	655	281	204	27		
020		3						7	623	634	645	656	282	205	28		
021		4						7	624	635	646	657	283	206	29		
022		5		↓				7	625	636	647	658	284	207	30		
023		-5		45				7	692	681	670	659	263	208	31		
024		-4						7	693	682	671	660	264	209	32		
025		-3						7	694	683	672	661	265	210	33		
026		-2						7	695	684	673	662	266	211	34		
027		-1						7	696	685	674	663	267	212	35		
028		0						7	697	686	675	664	268	213	36		
029		1						7	698	687	676	665	269	214	37		
030		2						7	699	688	677	666	270	215	38		
031		3						7	700	689	678	667	271	216	39		
032		4						7	701	690	679	668	272	217	40		
033		5		↓				7	702	691	680	669	273	218	41		
034		-5		67.5				7	703	714	725	736	252	219	42		
035		-4						7	704	715	726	737	253	220	43		
↓ 036	↓	-3	↓	↓	↓			7	705	716	727	738	254	221	44		
		1	7	13	19	25	31	37	43	49	55	61	67	73	76		
		COEFFICIENTS										IDVAR (1)		IDVAR (2)	NDV		
α OR β																	
SCHEDULES																	

Table II.A(Continued)

TEST: TWT 609		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE:								
DATA SET IDENTIFIER	CONFIGURATION	SCHO.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)											
		α	β	θ	ϕ				.6	.8	.9	1.20	1.46	1.96	4.96					
RIG 037	ET NOSE	-2	0	61.5	0			7	706	717	728	739	255	222	45					
038		-1						7	707	718	729	740	256	223	46					
039		0						7	708	719	730	741	257	224	47					
040		1						7	709	720	731	742	258	225	48					
041		2						7	710	721	732	743	259	226	49					
042		3						7	711	722	733	744	260	227	50					
043		4						7	712	723	734	745	261	228	51					
044		5						7	713	724	735	746	262	229	52					
045		-5		90				7	780	769	758	747	241	230	53					
046		-4						7	781	770	759	748	242	231	54					
047		-3						7	782	771	760	749	243	232	55					
048		-2						7	783	772	761	750	244	233	56					
049		-1						7	784	773	762	751	245	234	57					
050		0						7	785	774	763	752	246	235	58					
051		1						7	786	775	764	753	247	236	59					
052		2						7	787	776	765	754	248	237	60					
053		3						7	788	777	766	755	249	238	61					
054		4						7	789	778	767	756	250	239	62					
		1	7	13	19	25	31	37	43	49	55	61	67	73	76					
COEFFICIENTS																		IDVAR (1)	IDVAR (2)	NDV
α OR β																				
SCHEDULES																				

Table II.A (Continued)

TEST: TWT 609		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE								
DATA SET IDENTIFIER	CONFIGURATION	SCHD		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE DEPENDENT VARIABLE)											
		α	β	θ	ϕ				0.6	0.8	0.9	1.2	1.46	1.96	4.96					
RIG 055	ET NOSE	5	0	90	0			7	790	779	768	757	251	240	63					
056		-5		180				7	527	538	549	560	296	172	64					
057		-4						7	528	539	550	561	297	173	65					
058		-3						7	529	540	551	562	298	174	66					
059		-2						7	530	541	552	563	299	175	67					
060		-1						7	531	542	553	564	300	176	68					
061		0						7	532	543	554	565	301	177	69					
062		1						7	533	544	555	566	302	178	70					
063		2						7	534	545	556	567	303	179	71					
064		3						7	535	546	557	568	304	180	72					
065		4						7	536	547	558	569	305	181	73					
066		5						7	537	548	559	570	306	182	74					
067		-5		202.5				7	516	505	494	483	307	160	83					
068		-4						7	517	506	495	484	308	161	84					
069		-3						7	518	507	496	485	309	162	85					
070		-2						7	519	508	497	486	310	163	86					
071		-1						7	520	509	498	487	311	164	87					
072		0						7	521	510	499	488	312	165	88					
		1	7	13	19	25	31	37	43	49	55	61	67	73	76					
		COEFFICIENTS																		
		IDVAR (1) IDVAR (2) NDV																		
		SCHEDULES																		

Table II.A.(Continued)

TEST: TWT 609		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE:						
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)									
		α	β	Θ	Φ				0.6	0.8	0.9	1.2	1.46	1.96	4.96			
RIG 073	ET NOSE	1	0	202.5	0			7	522	511	500	489	313	166	89			
074		2						7	523	512	501	490	314	167	90			
075		3						7	524	513	502	491	315	168	91			
076		4						7	525	514	503	492	316	169	92			
077		5		▼				7	526	515	504	493	317	170	93			
078		-5		22.5				7	439	450	461	472	318	149	94			
079		-4						7	440	451	462	473	319	150	95			
080		-3						7	441	452	463	474	320	151	96			
081		-2						7	442	453	464	475	321	152	97			
082		-1						7	443	454	465	476	322	153	98			
083		0						7	444	455	466	477	323	154	99			
084		1						7	445	456	467	478	324	155	100			
085		2						7	446	457	468	479	325	156	101			
086		3						7	447	458	469	480	326	157	102			
087		4						7	448	459	470	481	327	158	103			
088		5		▼				7	449	460	471	482	328	159	104			
089		-5		247.5				7	428	417	406	395	329	138	105			
▼ 090	▼	-4	▼	▼	▼			7	429	418	407	396	330	139	106			
1		7	13	19	25	31	37	43	49	55	61	67	75	76				
		COEFFICIENTS										IDVAR (1)		IDVAR (2)	NOV			
α OR β																		
SCHEDULES																		

Table II.A.(Continued)

TEST: TWT 609

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE

DATA SET IDENTIFIER	CONFIGURATION	SCHD		PARAMETERS/VALUES				NO OF RUNS	MACH NUMBERS (OR ALTERNATE INCEP. DELT VARIABLE)											
		α	β	θ	ϕ				0.6	0.8	0.9	1.2	1.46	1.96	4.96					
RIG 091	ET NOSE	-3	0	247.5	0			7	430	419	408	397	331	140	107					
092		-2						7	431	420	409	398	332	141	108					
093		-1						7	432	421	410	399	333	142	109					
094		0						7	433	422	411	400	334	143	110					
095		1						7	434	423	412	401	335	144	111					
096		2						7	435	424	413	402	336	145	112					
097		3						7	436	425	414	403	337	146	113					
098		4						7	437	426	415	404	338	147	114					
099		5		▼				7	438	427	416	405	339	148	115					
100		-5		270				7	351	362	373	384	340	127	116					
101		-4						7	352	363	374	385	341	128	117					
102		-3						7	353	364	375	386	342	129	118					
103		-2						7	354	365	376	387	343	130	119					
104		-1						7	355	366	377	388	344	131	120					
105		0						7	356	367	378	389	345	132	121					
106		1						7	357	368	379	390	346	133	122					
107		2						7	358	369	380	391	347	134	123					
▼ 108	▼	3	▼	▼	▼			7	359	370	381	392	348	135	124					

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS

IDVAR (1) IDVAR (2) NOV

α OR β
 SCHEDULES

Table II.A.(Continued)

TEST :		DATA SET/RUN NUMBER COLLATION SUMMARY										DATE :						
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)									
		α	β	θ	ϕ				0.6	0.8	0.9	1.20	1.46	1.96	4.96	3.00	4.00	
R1G 109	ET NOSE	4°	0°	270°	0°			7	360	371	382	393	349	136	125			
110		5°		270°				7	361/9	372/9	383/9	394/9	350/9	137/9	126			
111		0°		0°				2								17	14	
112		10°						4						184	13	18	15	
113		-10°						4						185	1	19	16	
114		0°		180°				2								81	78	
115		10°						4						183	75	82	79	
116		-10°						4						171	76	80	77	
117	ET NOSE	-5°		0°	0°			7	791	796	801	806	811	816	825			
118	(LIGHTNING ROD OFF)	-2°						7	792	797	802	807	812	817	826			
119		0						9	793/9	798/9	803/9	808/9	813/9	818/9	827	836	832	
120		2						7	794	799	804	809	814	819	828			
121		5						7	795/9	800/9	805/9	810/9	815/9	820/9	829			
122		10						4						822/9	831	837	834	
123		-10						4						821/9	830	835	833	
124		0		180°				2								839	842	
125		10						4						824	845	840	843	
126		-10						4						823	844	838	841	

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β
COEFFICIENTS
IDVAR (1)
IDVAR (2)
NOV

SCHEDULES

TABLE II.B.

COMBINED DATASETS

<u>Resulting Dataset</u>	<u>Datasets Combined to Form Resulting Dataset</u>	<u>Theta, θ, Degrees</u>
BIG 001	RIG 001	0
	RIG 012	22.5
	RIG 023	45
	RIG 034	67.5
	RIG 045	90
	RIG 056	180
	RIG 067	202.5
	RIG 078	225
	RIG 089	247.5
	RIG 100	270
BIG 002	RIG 002	0
	RIG 013	22.5
	RIG 024	45
	RIG 035	67.5
	RIG 046	90
	RIG 057	180
	RIG 068	202.5
	RIG 079	225
	RIG 090	247.5
	RIG 101	270
BIG 003	RIG 003	0
	RIG 014	22.5
	RIG 025	45
	RIG 036	67.5
	RIG 047	90
	RIG 058	180
	RIG 069	202.5
	RIG 080	225
	RIG 091	247.5
	RIG 102	270

TABLE II.B. (Continued)

COMBINED DATASETS		
<u>Resulting Dataset</u>	<u>Datasets Combined to Form Resulting Dataset</u>	<u>Theta, θ, Degrees</u>
BIG 004	RIG 004	0
	RIG 015	22.5
	RIG 026	45
	RIG 037	67.5
	RIG 048	90
	RIG 059	180
	RIG 070	202.5
	RIG 081	225
	RIG 092	247.5
	RIG 103	270
BIG 005	RIG 005	0
	RIG 016	22.5
	RIG 027	45
	RIG 038	67.5
	RIG 049	90
	RIG 060	180
	RIG 071	202.5
	RIG 082	225
	RIG 093	247.5
	RIG 104	270
BIG 006	RIG 006	0
	RIG 017	22.5
	RIG 028	45
	RIG 039	67.5
	RIG 050	90
	RIG 061	180
	RIG 072	202.5
	RIG 083	225
	RIG 094	247.5
	RIG 105	270

TABLE II.B. (Continued)

COMBINED DATASETS		
<u>Resulting Dataset</u>	<u>Datasets Combined to Form Resulting Dataset</u>	<u>Theta, θ, Degrees</u>
BIG 007	RIG 007	0
	RIG 018	22.5
	RIG 029	45
	RIG 040	67.5
	RIG 051	90
	RIG 062	180
	RIG 073	202.5
	RIG 084	225
	RIG 095	247.5
	RIG 106	270
BIG 008	RIG 008	0
	RIG 019	22.5
	RIG 030	45
	RIG 041	67.5
	RIG 052	90
	RIG 063	180
	RIG 074	202.5
	RIG 085	225
	RIG 096	247.5
	RIG 107	270
BIG 009	RIG 009	0
	RIG 020	22.5
	RIG 031	45
	RIG 042	67.5
	RIG 053	90
	RIG 064	180
	RIG 075	202.5
	RIG 086	225
	RIG 097	247.5
	RIG 108	270

TABLE II.B. (Concluded)

COMBINED DATASETS		
<u>Resulting Dataset</u>	<u>Datasets Combined to Form Resulting Dataset</u>	<u>Theta, θ, Degrees</u>
BIG 010	RIG 010	0
	RIG 021	22.5
	RIG 032	45
	RIG 043	67.5
	RIG 054	90
	RIG 065	180
	RIG 076	202.5
	RIG 087	225
	RIG 098	247.5
	RIG 109	270
BIG 011	RIG 011	0
	RIG 022	22.5
	RIG 033	45
	RIG 044	67.5
	RIG 055	90
	RIG 066	180
	RIG 077	202.5
	RIG 088	225
	RIG 099	247.5
	RIG 110	270
<u>Resulting Dataset</u>	<u>Datasets Combined to Form Resulting Dataset</u>	<u>Alpha, α, Degrees</u>
A1G006	R1G113	-10
	R1G006	0
	R1G111	0
	R1G112	10
A1G117	R1G117	-5
	R1G118	-2
	R1G119	0
	R1G120	2
	R1G121	5
A1G123	R1G123	-10
	R1G119	0
	R1G122	10

Table III.

MODEL-DIMENSIONAL DATA

MODEL COMPONENT: BODY - ET NOSEGENERAL DESCRIPTION: EXTERNAL OXYGEN-HYDROGEN TANK NOSE CONE WITH NOSEPROTUBERANCEMODEL SCALE = .0091DRAWING NUMBER: VL78-000062B

<u>DIMENSIONS:</u>	<u>THEORETICAL</u>		<u>ACTUAL MEASURED</u>
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>	<u>MODEL SCALE</u>
Length, IN. (NOSE @ $X_T=298$)	<u>624.835</u>	<u>5.681</u>	<u> </u>
Max. Width, IN. DIA	<u>330.2</u>	<u>3.000</u>	<u> </u>
Max. Depth	<u> </u>	<u> </u>	<u> </u>
Fineness Ratio	<u> </u>	<u> </u>	<u> </u>
Area			
Max. Cross-Sectional	<u>85633.6</u>	<u>7.07 IN.²</u>	<u> </u>
Planform	<u> </u>	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>	<u> </u>

TABLE IV.
PORT NUMBER LOCATION

<u>Port Number</u>	<u>Model Long. Sta.</u>	<u>X/ρ_B*</u>
1	.2813	.0164
2	.3054	.0178
3	.3383	.0197
4	.3796	.0221
5	.4250	.0248
6	.471	.0275
7	.521	.0304
8	.611	.0356
9	.661	.0386
10	.711	.0415
11	.761	.0444
12	.841	.0491
13	1.001	.0584
14	1.161	.0677
15	1.321	.0771
16	1.459	.0851
17	1.597	.0932
18	1.813	.1058
19	2.029	.1184
20	2.245	.1310
21	2.869	.1674
22	3.169	.1849

$$*\rho_B = 17.143$$

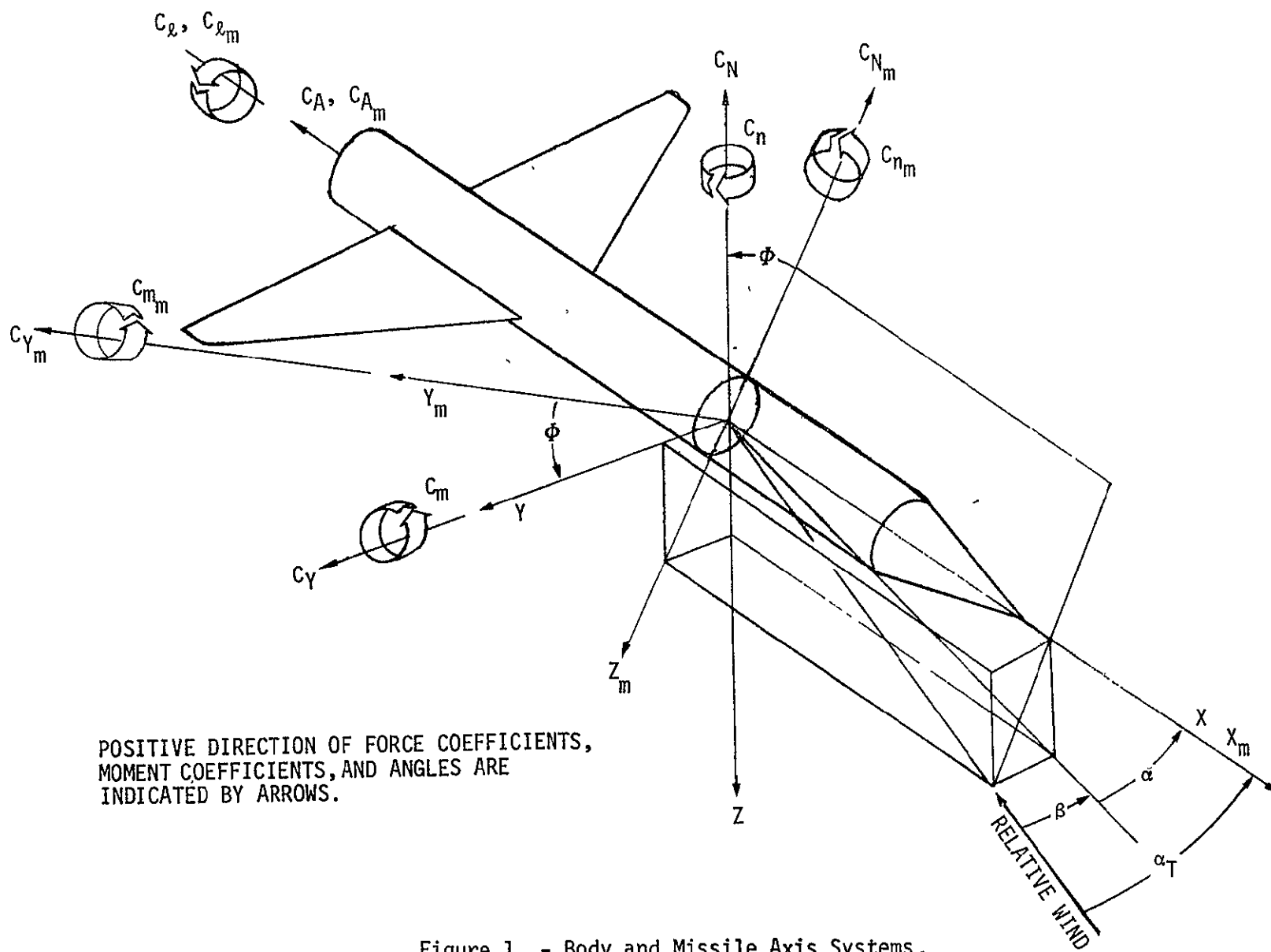


Figure 1. - Body and Missile Axis Systems.

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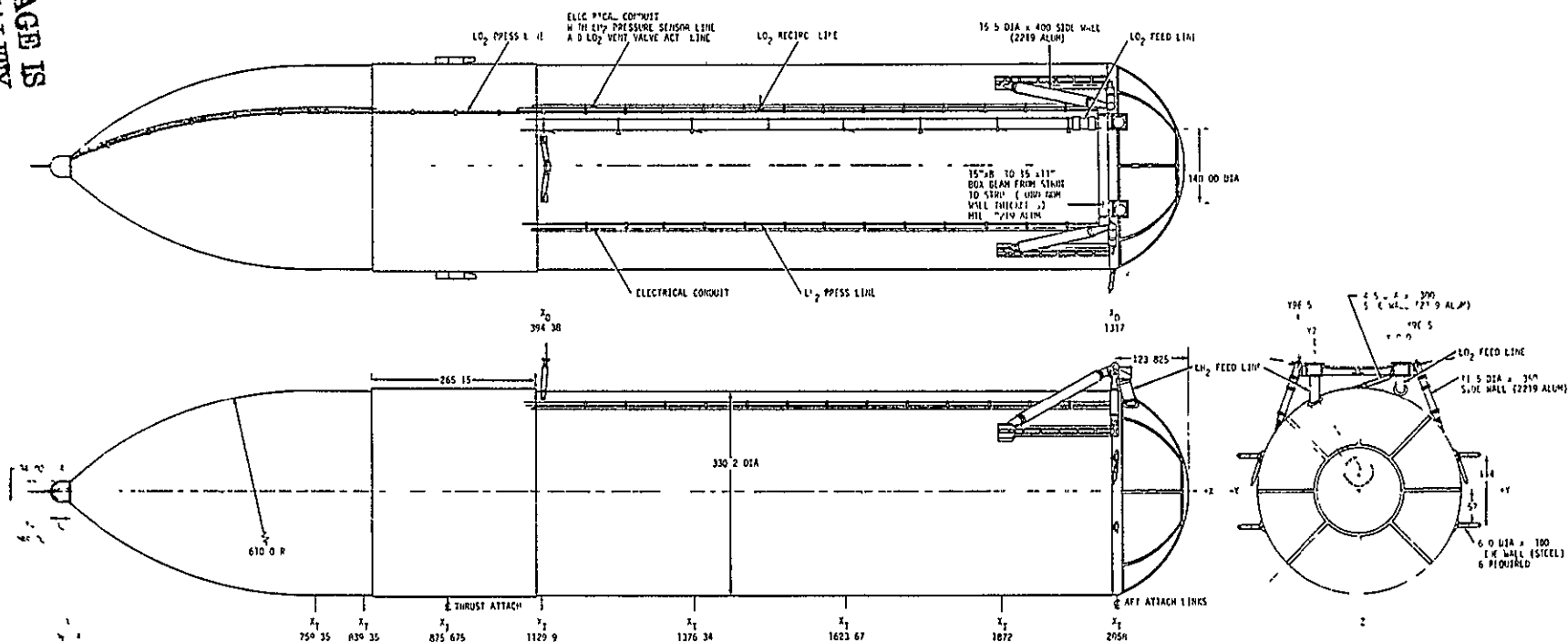


Figure 2. Configuration Definition from Rockwell Drawing VL78-000062B.

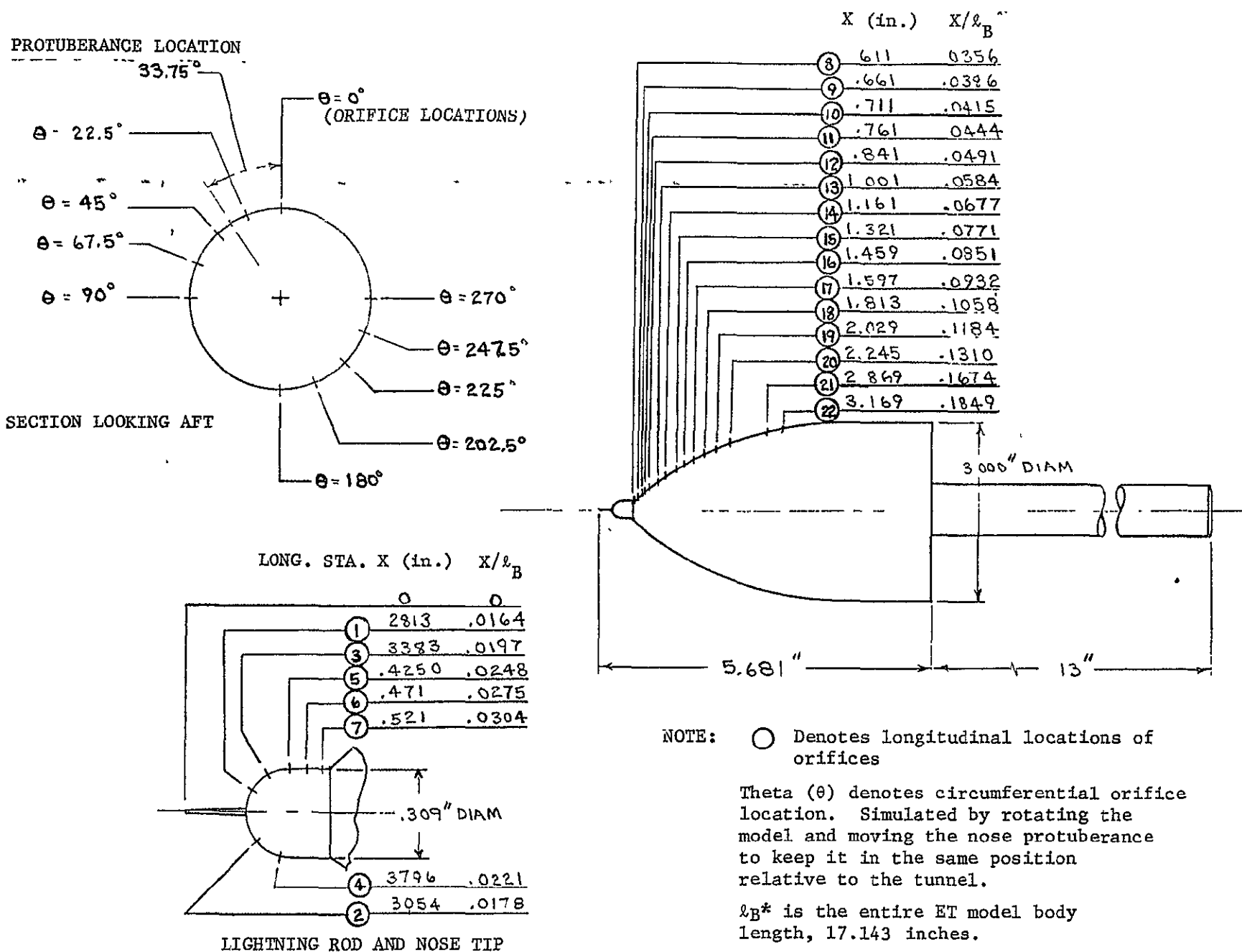
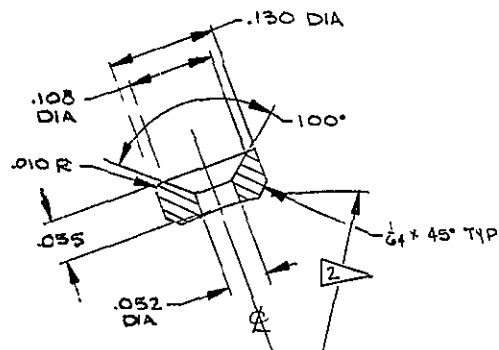
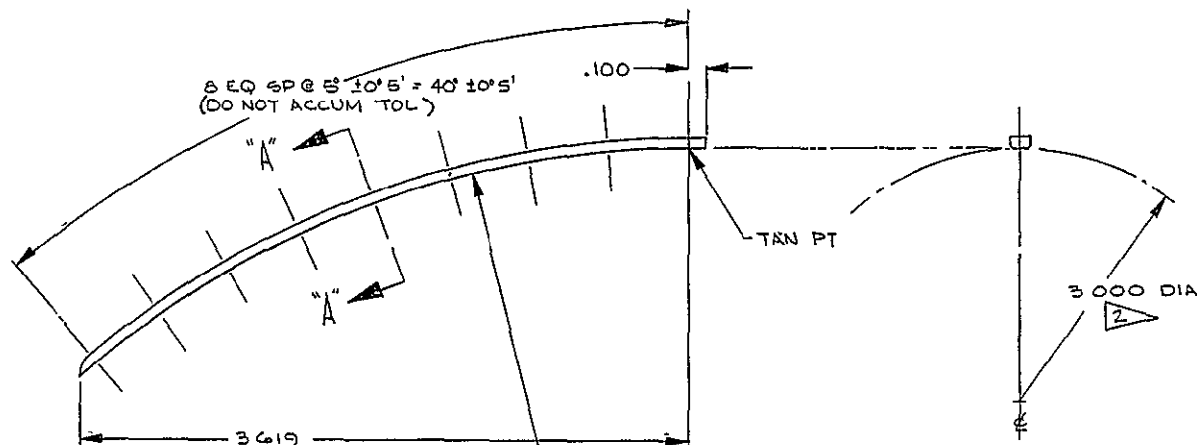


Figure 3. Orifice and Nose Protuberance Location.

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SECTION A-A'
SCALE 10/1
TYP & PL.

5542 R

NOTES

1 32

2 MACHINE TO MATCH SURFACE OF MODEL #470 (80M51379)

		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING 8-2-74		TUNNEL		GEORGE C MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA DWG NO. 80M32694 SHEET 01 OF 01	
SEE ENGINEERING RECORDS		TOLERANCES ARE IN INCHES		FRACTIONS DECIMALS ANGLES $\pm \frac{1}{64}$ $\pm .005$ $\pm 0^\circ 30'$					
MATERIAL 80M42719 MOD 470		CRES. TYPE OPT.		APPROVED					
NEXT ASSY USED ON		HEAT TREATMENT		WEIGHT CHECKER DATE CODE					
APPLICATION		FINAL PROTECTIVE FINISH		DIRECTOR		SCALE 2/1 & NOTED		UNIT WEIGHT	

Figure 4. Nose Protuberance, LO₂ Feed Line and LO₂ Recirculation Line Combined.

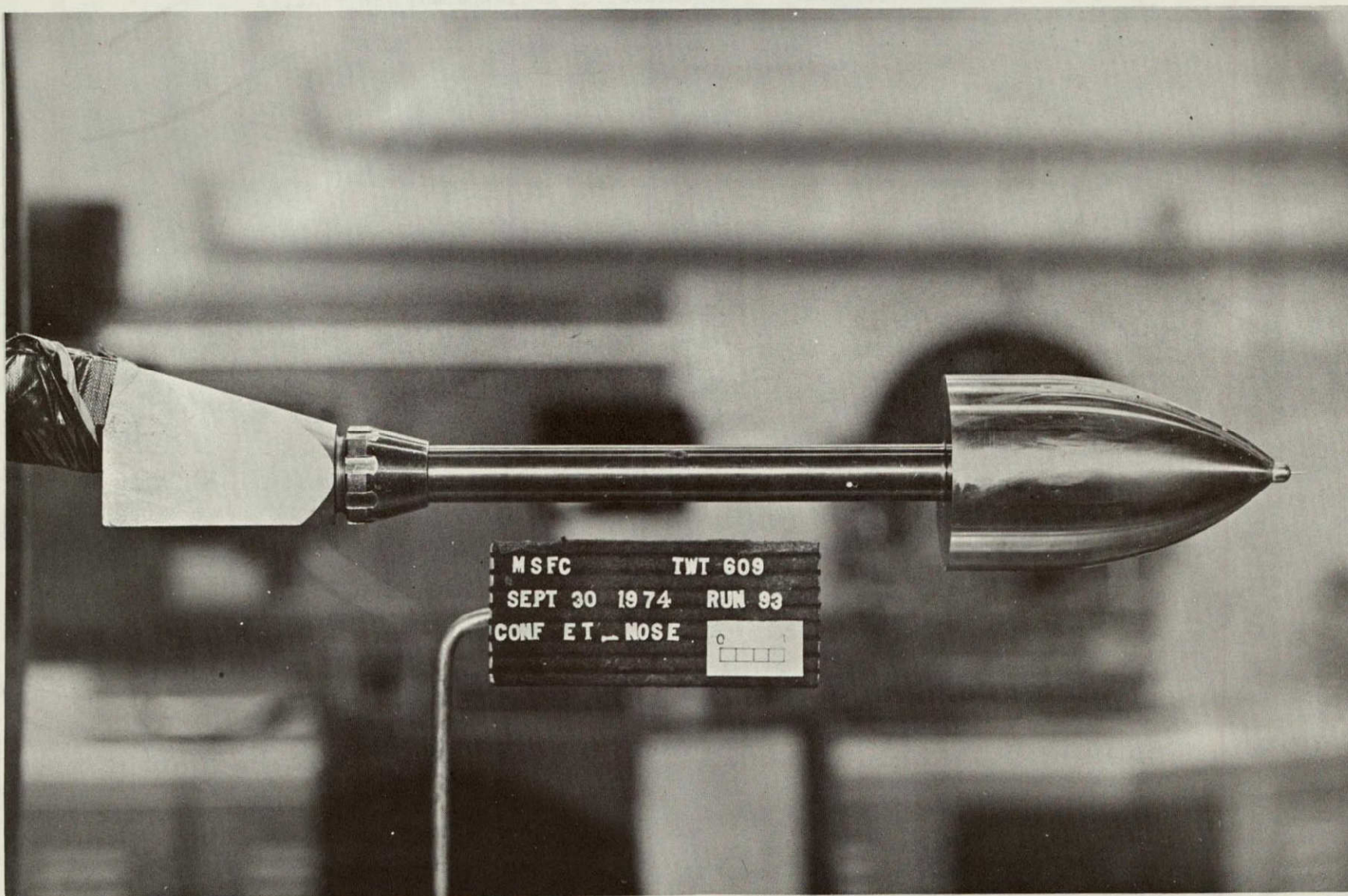


Figure 5. Installation Photograph of ET Nose with Lightning Rod (Nose Spike).

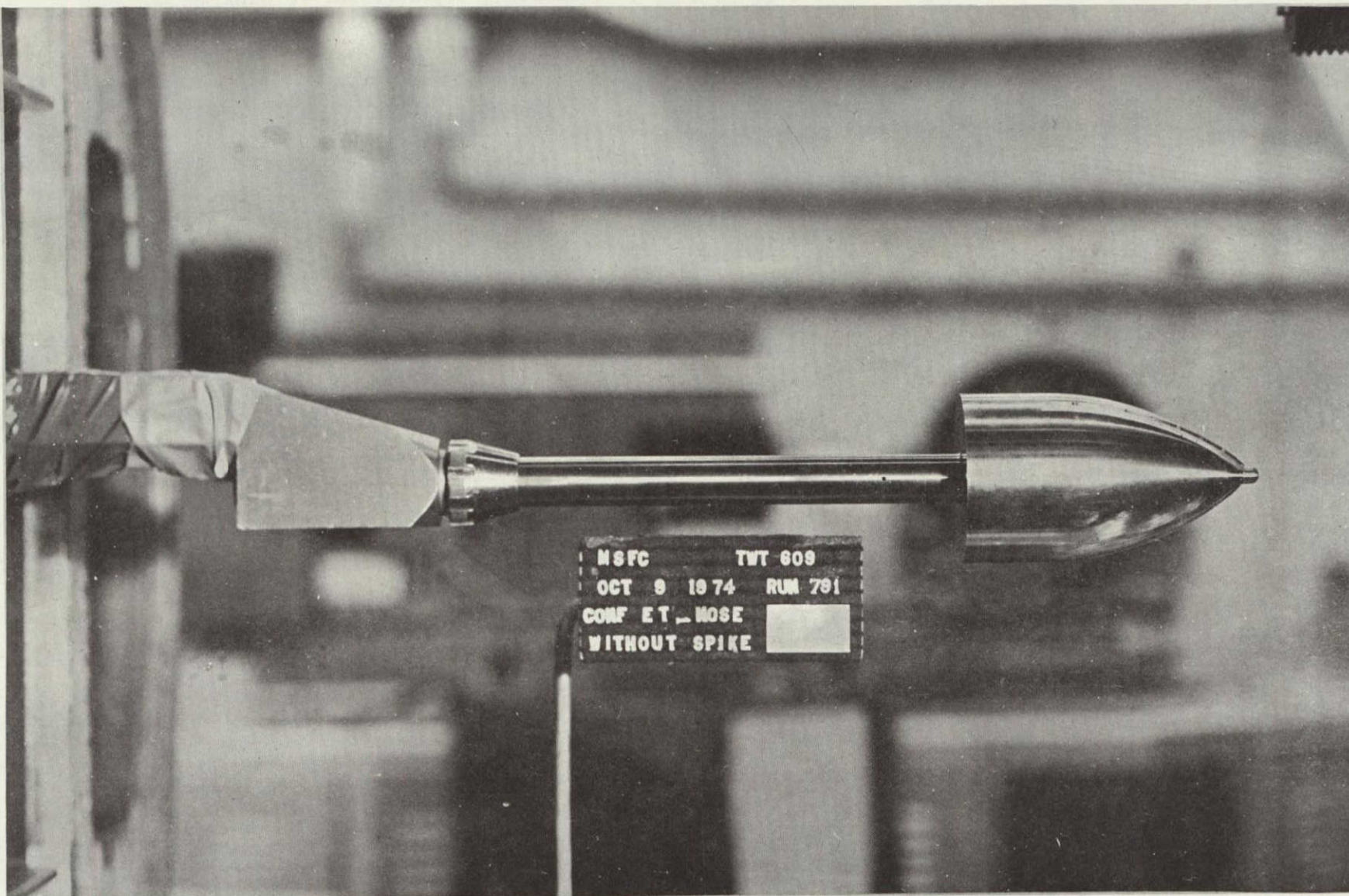


Figure 6. Installation Photograph of ET Nose without Lightning Rod.

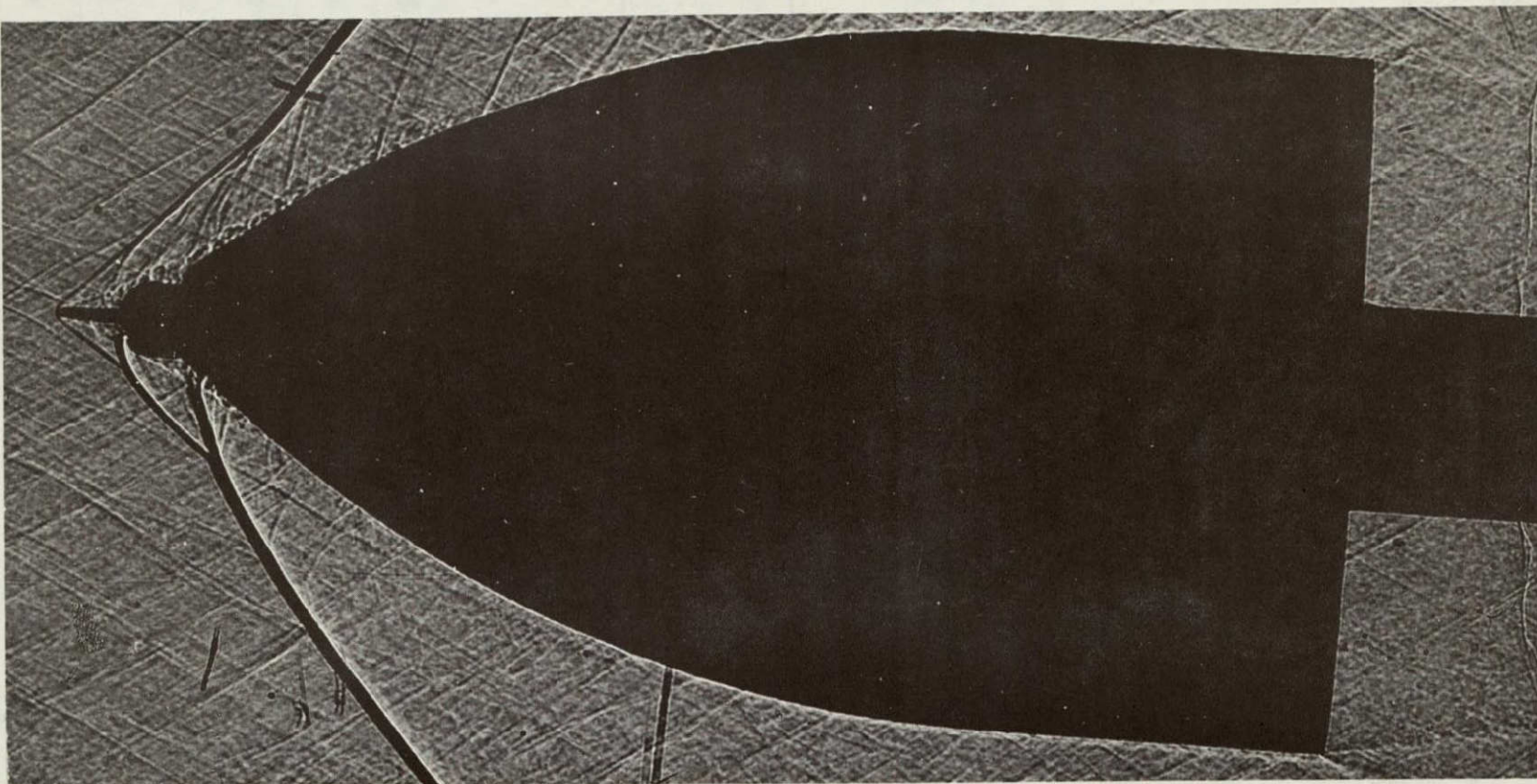


Figure 7. Flow Visualization Photograph of Nose at $M = 1.96$ and $\alpha = 5^\circ$ (with Lightning Rod) .

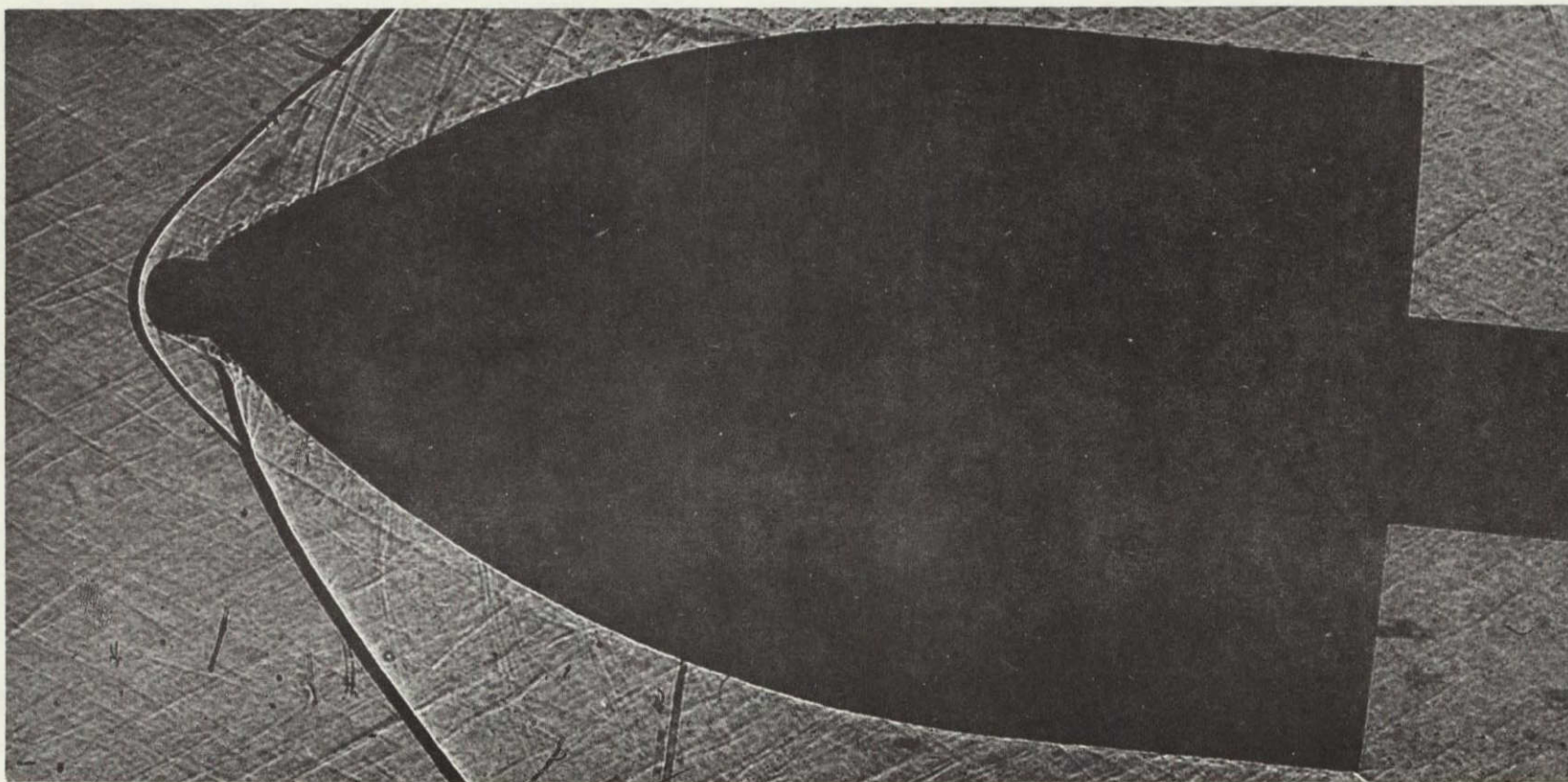


Figure 8. Flow Visualization Photograph of Nose at $M = 1.96$ and $\alpha = 5^\circ$ (without Lightning Rod).

APPENDIX

TABULATED SOURCE DATA

(See VOLUME 1 for plotted DATA FIGURES)

Plotted data listings are available on request
from Data Management Services.

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 1

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG001) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN XT
LREF = 330.2000 IN. YMRP = .0000 IN YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = .000
PHI = .000

MACH (1) = .599 ALPHA (1) = -5.040 PO = 22.010 Q(PSI) = 4.3410 RN/L = 4.9500 P = 17.265

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.0355
.018 .8330
.020 .5137
.022 .4121
.025 .5026
.028 .7495
.030 .8444
.036 .8900
.039 .8331
.041 .7864
.044 .7217
.049 .6614
.058 .5461
.068 .4412
.077 .3527
.085 .3059
.093 .2666
.106 .1285
.118 .0933
.131 -.0076
.167 -.2486
.185 -.3326

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MACH (2) = .801 ALPHA (1) = -5.040 PO = 22.001 Q(PSI) = 6.4720 RN/L = 5.9300 P = 14.424

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.1139
.018 .8944
.020 .5659
.022 .4426
.025 .5676
.028 .8161
.030 .9147
.036 .9656

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 2

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16001)

MACH (2) = .801 ALPHA (1) = -5 040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.9075
.041	.8537
.044	.7857
.049	.7235
.058	.6104
.068	.4994
.077	.4094
.085	.3574
.093	.3160
.106	.1622
.118	.1481
.131	.0118
.167	-.2776
.185	-.3951

MACH (3) = .905 ALPHA (1) = -5.040 PO = 22.001 Q(PSI) = 7.4170 RN/L = 6.2700 P = 12.938

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.1648
.018	.9439
.020	.6196
.022	.4775
.025	.6139
.028	.8665
.030	.9583
.036	1.0175
.039	.9624
.041	.9066
.044	.8385
.049	.7769
.058	.6610
.068	.5518
.077	.4629
.085	.4102
.093	.3680
.106	.2144
.118	.2178
.131	.0589
.167	-.2468
.185	-.3738

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 3

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G001)

MACH (4) = 1.203 ALPHA (1) = -5.040 PO = 22.005 Q(PSI) = 9.1550 RN/L = 6.6500 P = 9.0440

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.3400
.018	1.1498
.020	.8428
.022	.8622
.025	.8797
.028	.9729
.030	1.0108
.036	1.1918
.039	1.1605
.041	1.1080
.044	1.0427
.049	.9810
.058	.8692
.068	.7712
.077	.6890
.085	.6410
.093	.6082
.106	.4671
.118	.4377
.131	.3409
.167	.0826
.185	-.0184

MACH (5) = 1.452 ALPHA (1) = -5.040 PO = 22.005 Q(PSI) = 9.4790 RN/L = 6.5100 P = 6.4250

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	.7086
.018	1.3229
.020	.8224
.022	.6560
.025	.8400
.028	.8963
.030	.9081
.036	1.2276
.039	1.2933
.041	1.2256
.044	1.1232
.049	1.0330
.058	.9000
.068	.7918
.077	.7143

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16001)

MACH (5) = 1.452 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.6714
.093	.6466
.106	.4988
.118	.4829
.131	.3976
.167	.1414
.185	.0773

MACH (6) = 1.967 ALPHA (1) = -5.040 PO = 28.007 Q(PSI) = 10.203 RN/L = 6.9800 P = 3.7670

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.8864
.018	1.7311
.020	.8580
.022	.3489
.025	.3615
.028	.3627
.030	.3610
.036	.6740
.039	1.0384
.041	1.2117
.044	1.1257
.049	1.0343
.058	.8985
.068	.7695
.077	.7280
.085	.6817
.093	.6633
.106	.4927
.118	.5005
.131	.4062
.167	.1968
.185	.1316

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 5

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R160011)

MACH (7) = 4.960 ALPHA (1) = -5.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.3300 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.5073
.018	3.1496
.020	.6162
.022	.2201
.025	.2533
.028	.2427
.030	.3002
.036	.4408
.039	1.0758
.041	1.0092
.044	1.0667
.049	1.1952
.058	.8989
.068	.7583
.077	.6781
.085	.6570
.093	.6101
.106	.4937
.118	.5270
.131	.3864
.167	.3380
.185	.1974

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G002) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMPP = .0000 IN. XT
 LREF = 330 2000 IN. YMRP = .0000 IN. YT
 BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = .000
 PHI = .000

MACH (1) = .598 ALPHA (1) = -4.040 PO = 22.005 Q(PSI) = 4.3250 RN/L = 4.9400 P = 17.280

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.0281
 .018 .8005
 .020 .4735
 .022 .3833
 .025 .4818
 .028 .7359
 .030 .8260
 .036 .8730
 .039 .8165
 .041 .7679
 .044 .6971
 .049 .6365
 .058 .5192
 .068 .4122
 .077 .3230
 .085 .2769
 .093 .2398
 .106 .0973
 .118 .0676
 .131 -.0343
 .167 -.2704
 .185 -.3549

MACH (2) = .800 ALPHA (1) = -4.040 PO = 22.010 Q(PSI) = 6.4740 RN/L = 5.9300 P = 14.431

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.1051
 .018 .8655
 .020 .5484
 .022 .4091
 .025 .5621
 .028 .7516
 .030 .8675
 .036 .9437

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 7

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16002)

MACH (2) = .800 ALPHA (1) = -4.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.8963
.041	.8377
.044	.7672
.049	.7026
.058	.5811
.068	.4718
.077	.3811
.085	.3274
.093	.2881
.106	.1343
.118	.0971
.131	-.0168
.167	-.3056
.185	-.4205

MACH (3) = .906 ALPHA (1) = -4.040 PO = 22.005 Q(PSI) = 7.4300 RN/L = 6.2700 P = 12.920

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.1575
.018	.9418
.020	.6142
.022	.6602
.025	.6509
.028	.7713
.030	.8171
.036	.9754
.039	.9497
.041	.8972
.044	.8243
.049	.7578
.058	.6359
.068	.5248
.077	.4342
.085	.3819
.093	.3415
.106	.1865
.118	.1487
.131	.0342
.167	-.2687
.185	-.3965

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G002)

MACH (4) = 1.204 ALPHA (1) = -4.040 PO = 22.005 Q(PST) = 9.1590 RN/L = 6.6500 P = 9.0310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.3352
.018	1.1312
.020	.8388
.022	.8563
.025	.8816
.028	.8877
.030	.9218
.036	1.1325
.039	1.1381
.041	1.0962
.044	1.0252
.049	.9637
.058	.8461
.068	.7439
.077	.6631
.085	.6155
.093	.5822
.106	.4422
.118	.4132
.131	.3161
.167	.0631
.185	-.0386

MACH (5) = 1.462 ALPHA (1) = -4.060 PO = 22.005 Q(PST) = 9.4730 RN/L = 6.4900 P = 6.3330

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.6907
.018	1.1956
.020	.8018
.022	.6413
.025	.8140
.028	.8639
.030	.8630
.036	1.1668
.039	1.2750
.041	1.2199
.044	1.1150
.049	1.0215
.058	.8814
.068	.7732
.077	.6960

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 9

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G002)

MACH (5) = 1.462 ALPHA (1) = -4.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.085	.6515
.093	.6270
.106	.4792
.118	.4649
.131	.3796
.167	.1248
.185	.0493

MACH (6) = 1.966 ALPHA (1) = -4.060 PO = 28.019 Q(PSI) = 10.213 RN/L = 6.9800 P = 3.7740

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	.6562
.018	1.5250
.020	.8946
.022	.3103
.025	.3503
.028	.3701
.030	.3687
.036	.6328
.039	.9624
.041	1.1480
.044	1.0913
.049	1.0102
.058	.8801
.068	.7755
.077	.7053
.085	.6566
.093	.6434
.106	.4746
.118	.4793
.131	.3825
.167	.1777
.185	.1193

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OF POOR QUALITY

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 10

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G002)

MACH (7) = 4.960 ALPHA (1) = -4.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3304
.018	3.3783
.020	.6948
.022	.2533
.025	.2291
.028	.2170
.030	.3032
.036	.3486
.039	.9321
.041	.9987
.044	1.0062
.049	1.1241
.058	.8626
.068	.7280
.077	.6434
.085	.6298
.093	.5723
.106	.4635
.118	.5224
.131	.3531
.167	.3410
.185	.1671

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 11

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G003) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ.IN. XMRP = 0000 IN. XT
LREF = 330.2000 IN. YMRP = 0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = .000
PHI = .000

MACH (1) = 599 ALPHA (1) = -3.050 PO = 22.014 Q(PS1) = 4.3420 RN/L = 4.9400 P = 17.267

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.0221
.018 .8030
.020 .4768
.022 .3507
.025 .5013
.028 .6095
.030 .6839
.036 .8411
.039 .8063
.041 .7562
.044 .6854
.049 .6157
.058 .4957
.068 .3892
.077 .2969
.085 .2512
.093 .2175
.106 .0716
.118 .0416
.131 -.0538
.167 -.2911
.185 -.3669

MACH (2) = .799 ALPHA (1) = -3.060 PO = 22.001 Q(PS1) = 6.4610 RN/L = 5.9200 P = 14.441

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.1052
.018 .8700
.020 .5646
.022 .6038
.025 .6033
.028 .5909
.030 .6470
.036 .8768

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G003)

MACH (2) = .799 ALPHA (1) = -3.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	8775
.041	8324
.044	.7571
.049	.6832
.058	.5579
.068	.4464
.077	.3530
.085	.2995
.093	.2609
.106	.1030
.118	.0692
.131	-.0425
.167	- .3308
.185	- .4376

MACH (3) = .906 ALPHA (1) = -3.060 PO = 22.014 Q(PSI) = 7.4330 RN/L = 6.2800 P = 12.925

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.1519
.018	.9214
.020	.6213
.022	.6502
.025	.6717
.028	.6531
.030	.6832
.036	.9030
.039	.9238
.041	.8843
.044	.8118
.049	.7390
.058	.6104
.068	.4993
.077	.4069
.085	.3527
.093	.3155
.106	.1570
.118	.1204
.131	.0097
.167	- .2911
.185	-.4199

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 13

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G003)

MACH (4) = 1.204 ALPHA (1) = -3.060 PO = 21.993 Q(PSI) = 9.1530 RN/L = 6.6500 P = 9.0260

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 1.3383
.018 1.1101
.020 .8169
.022 .8455
.025 .8696
.028 .8600
.030 .8835
.036 1.0841
.039 1.1114
.041 1.0761
.044 1.0064
.049 .9434
.058 .8223
.068 .7180
.077 .6383
.085 .5883
.093 .5563
.106 .4161
.118 .3878
.131 .2911
.167 .0411
.185 -.0593

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MACH (5) = 1.463 ALPHA (1) = -3.060 PO = 22.005 Q(PSI) = 9.4720 RN/L = 6.4900 P = 6.3180

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 .5654
.018 1.0415
.020 .7936
.022 .6437
.025 .8145
.028 .8602
.030 .8492
.036 1.1154
.039 1.2387
.041 1.2049
.044 1.1028
.049 1.0035
.058 .8590
.068 .7479
.077 .6703

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G003)

MACH (5) = 1.463 ALPHA (1) = -3.060

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

085	.6263
093	.6042
.106	.4555
.118	.4429
.131	.3580
.167	.1056
.185	.0304

MACH (6) = 1.963 ALPHA (1) = -3.060 PO = 28.019 Q(PSI) = 10.229 RN/L = 6.9900 P = 3.7920

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.4823
.018	.2536
.020	.9303
.022	.2837
.025	.3509
.028	.3823
.030	.3767
.036	.5886
.039	.8797
.041	1.0882
.044	.0547
.049	.9893
.058	.8619
.068	.7617
.077	.6808
.085	.6401
.093	.6230
.106	.4684
.118	.4546
.131	.3618
.167	.1575
.185	.1063

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G003)

MACH (7) = 4.960 ALPHA (1) = -3.020 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1800 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	.3168
.018	1.1317
.020	1.3917
.022	.2881
.025	.2442
.028	.2321
.030	.3198
.036	.2548
.039	.4453
.041	1.0622
.044	.9714
.049	1.1166
.058	.8339
.068	.6963
.077	.6101
.085	.6026
.093	.5391
.106	.4347
.118	.5028
.131	.3334
.167	.3334
.185	1550

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 16

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16004) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN XT
 LREF = 330.2000 IN. YMRP = .0000 IN YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = .000
 PHI = .000

MACH (1) = .598 ALPHA (1) = -2.040 PO = 22.014 Q(PSI) = 4.3280 RN/L = 4.9400 P = 17.285

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.0280
 .018 .7815
 .020 .4730
 .022 .5315
 .025 .5292
 .028 .5267
 .030 .5661
 .036 .7810
 .039 .7799
 .041 .7377
 .044 .6640
 .049 .5929
 .058 .4625
 .068 .3577
 .077 .2637
 .085 .2159
 .093 .1844
 .106 .0409
 .118 .0104
 .131 -.0852
 .167 -.3155
 .185 -.3861

MACH (2) = .798 ALPHA (1) = -2.020 PO = 22.010 Q(PSI) = 6.4510 RN/L = 5.9300 P = 14.464

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 1.1142
 .018 .8520
 .020 .5364
 .022 .5837
 .025 .6014
 .028 .5896
 .030 .6245
 .036 .8296

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 17

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G004)

MACH (2) = .798 ALPHA (1) = -2.020

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.8489
.041	.8059
.044	.7320
.049	.6585
.058	.5253
.068	.4151
.077	.3208
.085	.2663
.093	.2300
.106	.0730
.118	.0373
.131	-.0725
.167	-.3586
.185	-.4631

MACH (3) = .905 ALPHA (1) = -2.040 PO = 22.010 Q(PS1) = 7.4190 RN/L = 6.2800 P = 12.945

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.1638
.018	.9040
.020	.5916
.022	.6371
.025	.6609
.028	.6449
.030	.6731
.036	.8666
.039	.8943
.041	.8603
.044	.7864
.049	.7143
.058	.5834
.068	.4702
.077	.3766
.085	.3253
.093	.2869
.106	.1267
.118	.0937
.131	-.0183
.167	-.3124
.185	-.4417

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G004)

MACH (4) = 1.204 ALPHA (1) = -2.040 PO = 22.010 Q(PSI) = 9.1620 RN/L = 6.6500 P = 9.0290

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.3490
.018	1.0945
.020	.7927
.022	.8319
.025	.8630
.028	.8485
.030	.8660
.036	1.0530
.039	1.0883
.041	1.0543
.044	.9880
.049	.9203
.058	.7959
.068	.6942
.077	.6120
.085	.5621
.093	.5329
.106	.3899
.118	.3620
.131	.2703
.167	.0188
.185	-.0762

MACH (5) = 1.463 ALPHA (1) = -2.040 PO = 22.001 Q(PSI) = 9.4710 RN/L = 6.5000 P = 6.3200

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.4781
.018	.8731
.020	.7667
.022	.6576
.025	.8088
.028	.8512
.030	.8432
.036	1.0550
.039	1.1830
.041	1.1820
.044	1.0877
.049	.9883
.058	.8362
.068	.7242
.077	.6455

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG004)

MACH (5) = 1.463 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.085	6007
.093	5805
.106	4296
.118	4233
.131	3355
.167	0861
.185	0108

MACH (6) = 1.962 ALPHA (1) = -2.060 PO = 28.003 Q(PSI) = 10.230 RN/L = 6.9900 P = 3.7970

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3724
.018	1.0032
.020	.8907
.022	2513
.025	.3556
.028	.3882
.030	.3853
.036	5536
.039	8004
.041	1.0168
.044	1.0173
.049	9470
.058	8452
.068	7258
.077	6538
.085	.6260
.093	.5948
.106	.4490
.118	.4280
.131	.3431
.167	.1377
.185	.0910

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G004)

MACH (7) = 4.960 ALPHA (1) = -2.060 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.1400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3138
.018	.4907
.020	1.2606
.022	.2972
.025	.2730
.028	.2701
.030	.3304
.036	.2609
.039	.3094
.041	.8792
.044	1.0561
.049	1.1170
.058	.7870
.068	.6585
.077	.5616
.085	.5602
.093	.5043
.103	.4092
.118	.4544
.131	.3077
.167	.2972
.185	.1384

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 21

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G005) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN XT
LREF = 330 2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 000
PHI = .000

MACH (1) = .603 ALPHA (1) = -1.040 PO = 22.022 Q(PS1) = 4.3450 RN/L = 4.9500 F = 17.272

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 1.0170
.018 .7593
.020 .4439
.022 .5014
.025 .5232
.028 .5314
.030 .5644
.036 .7433
.039 .7544
.041 .7168
.044 .6421
.049 .5688
.058 .4424
.068 .3315
.077 .2378
.095 .1947
.093 .1593
.106 .0166
.118 -.0083
.131 - .1033
.167 - .3282
.185 - .3962

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MACH (2) = .799 ALPHA (1) = -1.030 PO = 22.014 Q(PS1) = 6.4580 RN/L = 5.9400 F = 14.459

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.1040
.018 .8348
.020 .5066
.022 .5394
.025 .5890
.028 .5909
.030 .6228
.036 .7974

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16005)

MACH (2) = .799 ALPHA (1) = -1.030

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.8200
.041	.7836
.044	.7064
.049	.6322
.058	.5010
.068	.3861
.077	.2918
.085	.2406
.093	.2017
.106	.0454
.118	.0138
.131	-.0981
.167	-.3773
.185	-.4807

MACH (3) = .905 ALPHA (1) = -1.040 PO = 22.010 Q(PSI) = 7.4190 RN/L = 6.2900 P = 12.945

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP.

THETA .0000

X/L

.016	1.1576
.018	.8910
.020	.5610
.022	.5903
.025	.6446
.028	.6392
.030	.6684
.036	.8370
.039	.8666
.041	.8369
.044	.7598
.049	.6882
.058	.5579
.068	.4388
.077	.3472
.085	.2966
.093	.2569
.106	.0984
.118	.0661
.131	-.0469
.167	-.3437
.185	-.4592

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 23

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G005)

MACH (4) = 1.203 ALPHA (1) = -1.040 PO = 22.010 Q(PSI) = 9.1590 RN/L = 6.6700 P = 9.0390

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.3270
.018	1.0822
.020	.7595
.022	.7879
.025	.8447
.028	.8483
.030	.8736
.036	1.0347
.039	1.0612
.041	1.0290
.044	.9625
.049	.8948
.058	.7715
.068	.6677
.077	.5829
.085	.5372
.093	.5081
.106	.3632
.118	.3383
.131	.2480
.167	-.0035
.185	-.0956

MACH (5) = 1.464 ALPHA (1) = -1.060 PO = 22.005 Q(PSI) = 9.4720 RN/L = 6.5000 P = 6.3130

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	.4229
.018	.7348
.020	.7226
.022	.6821
.025	.8055
.028	.8459
.030	.8427
.036	1.0021
.039	1.1165
.041	1.1420
.044	1.0687
.049	.9753
.058	.8186
.068	.7009
.077	.6226

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G005)

MACH (5) = 1.464 ALPHA (1) = -1.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.085	5768
.093	5583
.106	.4039
.118	.4041
.131	.3103
.167	.0688
.185	- 0054

MACH (6) = 1.962 ALPHA (1) = -1.060 PO = 28.024 Q(PSI) = 10.235 RN/L = 6.9900 P = 3.7970

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	.3168
.018	.7719
.020	.8013
.022	.2190
.025	.3545
.028	.3990
.030	.3946
.036	.5227
.039	.7359
.041	.9421
.044	.9802
.049	.9216
.058	.8341
.068	.6987
.077	.6372
.085	.6036
.093	.5684
.106	.4334
.118	.4025
.131	.3228
.167	.1214
.185	.0731

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16005)

MACH (7) = 4.960 ALPHA (1) = -1.040 PO = 74.994 Q(PSI) = 2.5580 RN/L = 4.4300 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.2548
.018	.2791
.020	1.1926
.022	.2956
.025	.3125
.028	.3124
.030	.3362
.036	.3050
.039	.3139
.041	.5466
.044	1.0024
.049	1.0973
.058	.7220
.068	.6166
.077	.5393
.085	.4982
.093	.4714
.106	.3820
.118	.3289
.131	.2792
.167	.1762
.185	.1416

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16006) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = .000
 PHI = .000

MACH (1) = .598 ALPHA (1) = -.040 PO = 22.014 Q(PSI) = 4.3280 RN/L = 4.9500 P = 17.285

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .9578
 .018 .7168
 .020 .3916
 .022 .3721
 .025 .5040
 .028 .5205
 .030 .5849
 .036 .7276
 .039 .7200
 .041 .6804
 .044 .6158
 .049 .5401
 .058 .4091
 .068 .3001
 .077 .2091
 .085 .1611
 .093 .1311
 .105 -.0127
 .118 -.0395
 .131 -.1308
 .167 -.3536
 .185 -.4170

MACH (2) = .799 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 6.4560 RN/L = 5.9400 P = 14.456

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.0516
 .018 .7962
 .020 .4600
 .022 .4517
 .025 .5713
 .028 .5855
 .030 .6383
 .036 .7859

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G006)

MACH (2) = 799 ALPHA (1) = - 040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.039	.7927
.041	.7512
.044	.6804
.049	.6083
.058	.4753
.068	.3579
.077	.2630
.085	.2143
.093	.1762
.106	.0186
.118	-.0126
.131	-.1223
.167	-.3996
.185	-.5012

MACH (3) = 905 ALPHA (1) = -.040 PO = 22.018 Q(PSI) = 7.4330 RN/L = 6.3100 P = 12.930

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.1072
.018	.8593
.020	.5094
.022	.5090
.025	.6267
.028	.6301
.030	.6790
.036	.8307
.039	.8370
.041	.8019
.044	.7344
.049	.6581
.058	.5280
.068	.4155
.077	.3175
.085	.2670
.093	.2324
.106	.0695
.118	.0384
.131	-.0693
.167	-.3595
.185	-.4839

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG006)

MACH (4) = 1.203 ALPHA (1) = -.040 PO = 22.014 Q(PSI) = 9.1600 RN/L = 6.6800 P = 9.0410

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.2447
.018	1.0531
.020	.7116
.022	.7348
.025	.8354
.028	.8595
.030	.8843
.036	1.0176
.039	1.0404
.041	1.0061
.044	.9372
.049	.8705
.056	.7486
.068	.6405
.077	.5569
.085	.5139
.093	.4825
.106	.3371
.118	.3170
.131	.2247
.167	-.0222
.185	-.1172

MACH (5) = 1.463 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 9.4740 RN/L = 6.5100 P = 6.3230

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.4029
.018	.6115
.020	.6659
.022	.7005
.025	.7879
.028	.8332
.030	.8377
.036	.9423
.039	1.0320
.041	1.0668
.044	1.0284
.049	.9569
.058	.7977
.068	.6793
.077	.5994

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G006)

MACH (5) = 1.463 ALPHA (1) = -.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.5507
.093	.5339
.106	.3798
.118	.3788
.131	.2849
.167	.0488
.185	-.0201

MACH (6) = 1.957 ALPHA (1) = -.040 PO = 28.011 Q(PSI) = 10 257 RN/L = 7.0100 P = 3.8240

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.2866
.018	.5388
.020	.6594
.022	.1985
.025	.3555
.028	.4083
.030	.4051
.036	.5072
.039	.6892
.041	.8707
.044	.9347
.049	.8860
.058	.8258
.068	.6802
.077	.6365
.085	.5771
.093	.5454
.106	.4057
.118	.3749
.131	.3064
.167	.1047
.185	.0591

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G006)

MACH (7) = 4.960 ALPHA (1) = -.040 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.3100 P = .14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	.3290
.018	.2518
.020	.7054
.022	.3607
.025	.3410
.028	.3380
.030	.3895
.036	.3304
.039	.3289
.041	.4989
.044	.8429
.049	.0183
.058	.7525
.068	.5985
.077	.5149
.085	.5120
.093	.4453
.106	.3591
.118	.4304
.131	.2684
.167	.2937
.185	.1248

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G007) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ. IN. XMRP = 0000 IN. XT
LREF = 330 2000 IN YMRP = 0000 IN YT
BREF = 330 2000 IN ZMRP = 0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = .000
PHI = .000

MACH (1) = .599 ALPHA (1) = .980 PO = 22.005 Q(PSI) = 4.3350 RN/L = 4.9500 P = 17.267

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .8797
.018 .6498
.020 .3509
.022 .3458
.025 .4970
.028 .5498
.030 .5667
.036 .7015
.039 .7139
.041 .6684
.044 .5935
.049 .5150
.058 .3857
.068 .2702
.077 .1815
.085 .1360
.093 .1032
.106 .0396
.118 -.0601
.131 -.1548
.167 -.3660
.185 -.4326

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MACH (2) = .801 ALPHA (1) = .980 PO = 22.010 Q(PSI) = 6.4820 RN/L = 5.9100 P = 14.419

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .9636
.018 .7182
.020 .4191
.022 .4223
.025 .5651
.028 .5980
.030 .6187
.036 .7547

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16007)

MACH (2) = .801 ALPHA (1) = .980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.7786
.041	.7372
.044	.6581
.049	.5836
.058	.4483
.068	.3301
.077	.2379
.085	.1855
.093	.1483
.106	-.0066
.118	-.0378
.131	-.1480
.167	-.4220
.185	-.5201

MACH (3) = .900 ALPHA (1) = .980 PO = 22.001 Q(PSI) = 7.3790 RN/L = 6,2400 P = 13.003

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.0160
.018	.7757
.020	.4695
.022	.4808
.025	.6109
.028	.6386
.030	.6620
.036	.7944
.039	.8259
.041	.7846
.044	.7103
.049	.6354
.058	.5007
.068	.3813
.077	.2916
.085	.2389
.093	.1984
.106	.0414
.118	.0451
.131	-.1037
.167	-.3816
.185	-.5142

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10007)

MACH (4) = 1.200 ALPHA (1) = .980 PO = 22.001 Q(PSI) = 9.1440 RN/L = 6.6600 P = 9.0760

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.1600
.018	.9783
.020	.8785
.022	.7236
.025	.8242
.028	.8591
.030	.8659
.036	.9900
.039	1.0286
.041	.9937
.044	.9206
.049	.8489
.058	.7236
.068	.6153
.077	.5339
.085	.4883
.093	.4592
.105	.3136
.118	.3525
.131	.2046
.167	-.0436
.185	-.1332

MACH (5) = 1.452 ALPHA (1) = .960 PO = 22.014 Q(PSI) = 9.4820 RN/L = 6.5200 P = 6.4250

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3944
.018	.5462
.020	.6470
.022	.7123
.025	.7824
.029	.8220
.030	.8388
.036	.9011
.039	.9610
.041	.9975
.044	.9766
.049	.9288
.058	.7743
.068	.6511
.077	.5675

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G007)

MACH (5) = 1.452 ALPHA (1) = .960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.5241
.093	.5096
.106	.3550
.118	.3454
.131	.2526
.167	.0255
.185	-.0271

MACH (6) = 1.962 ALPHA (1) = .960 PO = 28.015 Q(P51) = 10.233 RN/L = 7.0200 P = 3.7970

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3004
.018	.4107
.020	.5326
.022	.2172
.025	.8947
.028	.4014
.030	.4013
.036	.4811
.039	.6203
.041	.7930
.044	.5111
.049	.8100
.058	.7771
.068	.5621
.077	.6087
.085	.5561
.093	.5238
.106	.3866
.118	.3537
.131	.2826
.167	.0893
.185	.0447

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G007)

MACH (7) = 4.960 ALPHA (1) = .960 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4 2200 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3350
.018	.2503
.020	.3729
.022	.3470
.025	.3319
.028	.3275
.030	.3864
.036	.3198
.039	.3169
.041	.4483
.044	.7477
.049	.9627
.058	.7341
.068	.5663
.077	.4878
.085	.4846
.093	.4211
.106	.3366
.118	.4151
.131	.2503
.167	.2851
.185	.1097

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G0081) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMPP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = .000
PHI = .000

MACH (1) = .599 ALPHA (1) = 1.980 PO = 22.010 Q(PSI) = 4.3410 RN/L = 4.9500 P = 17.265

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .8134
.018 .5988
.020 .3361
.022 .3659
.025 .4645
.028 .5151
.030 .5222
.036 .6527
.039 .6896
.041 .6496
.044 .5671
.049 .4902
.058 .3539
.068 .2387
.077 .1526
.085 .1046
.093 .0737
.106 -.0654
.118 -.0895
.131 -.1805
.167 -.3869
.185 -.4490

MACH (2) = .800 ALPHA (1) = 1.960 PO = 22.014 Q(PSI) = 6.4730 RN/L = 5.9000 P = 14.436

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .9089
.018 .6726
.020 .3995
.022 .4397
.025 .5385
.028 .5766
.030 .5802
.036 .7134

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G008)

MACH (2) = .800 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.7566
.041	.7183
.044	.6409
.049	.5586
.058	.4194
.068	.3012
.077	.2075
.085	.1563
.093	.1227
.106	-.0371
.118	-.0657
.131	-.1701
.167	-.4449
.185	-.5343

MACH (3) = 900 ALPHA (1) = 1.980 PO = 22.014 Q(PSI) = 7.3840 RN/L = 6.2500 P = 13.008

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	.9612
.018	.7266
.020	.4485
.022	.5038
.025	.5874
.028	.6244
.030	.6314
.036	.7533
.039	.8056
.041	.7725
.044	.6905
.049	.6119
.058	.4720
.068	.3529
.077	.2599
.085	.2088
.093	.1718
.106	.0132
.118	-.0170
.131	-.1270
.167	-.4103
.185	-.5321

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG008)

MACH (4) = 1.199 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 9.1420 RN/L = 6.6500 P = 9.0910

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.1248
.018	.9264
.020	.6605
.022	.7156
.025	.7933
.028	.8289
.030	.8337
.036	.9469
.039	1.0015
.041	.9733
.044	.9016
.049	.8272
.058	.6988
.068	.5902
.077	.5094
.085	.4640
.093	.4366
.106	.2885
.118	.2690
.131	.1836
.167	-.0618
.185	-.1498

MACH (5) = 1.447 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 9.4810 RN/L = 6.5100 P = 6.4730

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.4205
.018	.5200
.020	.6298
.022	.7184
.025	.7628
.028	.7999
.030	.8207
.036	.8656
.039	.9048
.041	.9342
.044	.9227
.049	.8913
.058	.7469
.068	.6261
.077	.5441

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16008)

MACH (5) = 1.447 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.4993
.093	.4838
.106	.3324
.118	.3177
.131	.2255
.167	.0154
.185	-.0514

MACH (6) = 1.961 ALPHA (1) = 1.960 PO = 28.015 Q(PSI) = 10.240 RN/L = 7.0200 P = 3.8040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3146
.018	.3445
.020	.4020
.022	.2709
.025	.7907
.028	.3960
.030	.3984
.036	.4640
.039	.5854
.041	.7222
.044	.7869
.049	.7884
.058	.7404
.068	.6343
.077	.5926
.085	.5339
.093	.5021
.106	.3650
.118	.3354
.131	.2638
.167	.0787
.185	.0296

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G008)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.1600 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.015	.3304
.018	.3153
.020	.2745
.022	.3183
.025	.2988
.028	.2911
.030	.3561
.036	.2852
.039	.2820
.041	.4302
.044	.6678
.049	.8958
.058	.7114
.068	.5438
.077	.4650
.085	.4635
.093	.3986
.106	.3168
.118	.4000
.131	.2338
.167	.2699
.185	.1007

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16009) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = .000
PHI = .000

MACH (1) = .598 ALPHA (1) = 2 980 PO = 22.005 Q(PSI) = 4.3270 RN/L = 4.9400 P = 17.277

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 7956
.018 .5802
.020 .3350
.022 .4109
.025 .4613
.028 .4736
.030 4835
.036 5560
.039 6230
.041 .6167
.044 .5470
.049 .4718
.058 .3287
.068 .2139
.077 .1266
.085 .0783
.093 .0487
.106 - .0915
.118 - .1139
.131 - .2031
.167 - .4054
.185 - .4603

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MACH (2) = .799 ALPHA (1) = 2 980 PO = 22.014 Q(PSI) = 6 4580 RN/L = 5.9000 P = 14.459

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .8753
.018 .6494
.020 .3951
.022 .4825
.025 .5233
.028 .5374
.030 .5467
.036 .6295

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16009)

MACH (2) = .799 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.7012
.041	.6888
.044	.6175
.049	.5368
.058	.3938
.068	.2727
.077	.1787
.085	.1271
.093	.0941
.106	-.0651
.118	-.0935
.131	-.1972
.167	-.4664
.185	-.5515

MACH (3) = .901 ALPHA (1) = 2.980 PO = 22.018 Q(PSI) = 7.3890 RN/L = 6.2500 P = 13.005

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.9281
.018	.7098
.020	.4496
.022	.5410
.025	.5715
.028	.5869
.030	.5968
.036	.6691
.039	.7451
.041	.7365
.044	.6670
.049	.5931
.058	.4445
.068	.3231
.077	.2334
.095	.1786
.093	.1436
.106	-.0140
.118	-.0448
.131	-.1524
.167	-.4321
.185	-.5477

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TABULATED SOURCE DATA, MSFC TWT C09 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G009)

MACH (4) = 1.195 ALPHA (1) = 2.980 PO = 22.001 Q(PSI) = 9.1280 RN/L = 6.6500 P = 9.1310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.1121
.018	.9082
.020	.6618
.022	.7481
.025	.7822
.028	.7923
.030	.8037
.036	.8759
.039	.9384
.041	.9346
.044	.8802
.049	.8088
.058	.6753
.068	.5656
.077	.4843
.085	.4389
.093	.4117
.106	.2631
.118	.2453
.131	.1599
.167	-.0812
.185	-.1686

MACH (5) = 1.453 ALPHA (1) = 2.980 PO = 22.010 Q(PSI) = 9.4800 RN/L = 6.5000 P = 6.4180

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.4466
.018	.5021
.020	.5940
.022	.6837
.025	.7188
.028	.7510
.030	.7784
.036	.8184
.039	.8456
.041	.8747
.044	.8706
.049	.8505
.058	.7278
.068	.6094
.077	.5234

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G009)

MACH (5) = 1.453 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.4788
.093	.4621
.106	.3179
.118	.2993
.131	.2132
.167	-.0096
.185	-.0561

MACH (6) = 1.959 ALPHA (1) = 2.980 PO = 28.024 Q(PSI) = 10.255 RN/L = 7.0200 P = 3.8190

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3160
.018	.3294
.020	.3253
.022	.3082
.025	.7116
.028	.3815
.030	.3771
.036	.4311
.039	.5341
.041	.6405
.044	.7048
.049	.7323
.058	.6926
.068	.6054
.077	.5737
.085	.5099
.093	.4815
.106	.3434
.118	.3141
.131	.2431
.167	.0579
.185	.0115

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G009)

MACH (7) = 4.960 ALPHA (1) = 2.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1200 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3274
.018	.2412
.020	.2639
.022	.2518
.025	.2548
.028	.2442
.030	.3229
.036	.2458
.039	.2458
.041	.4257
.044	.6388
.049	.8187
.058	.6917
.068	.5239
.077	.4408
.085	.4453
.093	.3803
.106	.2956
.118	.3985
.131	.2170
.167	.2639
.185	.0915

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG010) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = .000
 PHI = .000

MACH (1) = .598 ALPHA (1) = 3.960 PO = 22.005 Q(PSI) = 4.3270 RN/L = 4.9400 P = 17.277

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .7871
 .018 .5504
 .020 .3185
 .022 .4228
 .025 .4671
 .028 .4565
 .030 .4635
 .036 .5010
 .039 .5603
 .041 .5645
 .044 .5135
 .049 .4457
 .058 .3062
 .068 .1897
 .077 .0982
 .085 .0567
 .093 .0237
 .106 -.1158
 .118 -.1336
 .131 -.2224
 .167 -.4143
 .185 -.4696

MACH (2) = .798 ALPHA (1) = 3.960 PO = 22.010 Q(PSI) = 6.4450 RN/L = 5.9000 P = 14.474

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 .8644
 .018 .6238
 .020 .3840
 .022 .5014
 .025 .5268
 .028 .5173
 .030 .5266
 .036 .5682

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G010)

MACH (2) = .798 ALPHA (1) = 3.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.6261
.041	.6304
.044	.5886
.049	.5119
.058	.3695
.068	.2484
.077	.1485
.085	.1013
.093	.0678
.106	-.0940
.118	-.1170
.131	-.2201
.167	-.4835
.185	-.5645

MACH (3) = 901 ALPHA (1) = 3.960 PO = 22.001 Q(PSI) = 7.3850 RN/L = 6.2500 P = 12.993

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	.9170
.018	.6846
.020	.4392
.022	.5601
.025	.5752
.028	.5702
.030	.5775
.036	.6124
.039	.6735
.041	.6849
.044	.6381
.049	.5081
.058	.4219
.068	.2984
.077	.2045
.085	.1531
.093	.1168
.106	-.0412
.118	-.0695
.131	-.1773
.167	-.4526
.185	-.5672

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OF POOR QUALITY

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 48

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G010)

MACH (4) = 1.191 ALPHA (1) = 3.960 PO = 22.005 Q(PSI) = 9.1170 RN/L = 6.6600 P = 9.1790

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.1036
.018	.8901
.020	.6513
.022	.7571
.025	.7833
.028	.7777
.030	.7867
.036	.8232
.039	.8731
.041	.8852
.044	.8478
.049	.7828
.058	.6531
.068	.5422
.077	.4583
.085	.4151
.093	.3877
.106	.2378
.118	.2225
.131	.1369
.167	- .1002
.185	- .1865

MACH (5) = 1.447 ALPHA (1) = 3.960 PO = 22.005 Q(PSI) = 9.4810 RN/L = 6.5100 P = 6.4680

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.015	.4662
.019	.5127
.020	.5756
.022	.6461
.025	.6898
.028	.7220
.030	.7473
.036	.7877
.039	.8138
.041	.8350
.044	.8322
.049	.8134
.058	.6955
.068	.5813
.077	.5013

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G010)

MACH (5) = 1.447 ALPHA (1) = 3.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.4572
.093	.4352
.106	.2933
.118	.2749
.131	.1900
.167	-.0135
.185	-.0795

MACH (6) = 1.954 ALPHA (1) = 3.960 PO = 28.019 Q(PSI) = 10.282 RN/L = 7.0400 P = 3.8490

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3321
.018	.3405
.020	.3069
.022	.3364
.025	.6414
.028	.3754
.030	.3824
.036	.4259
.039	.5048
.041	.5943
.044	.6549
.049	.6917
.058	.6578
.068	.6060
.077	.5484
.085	.5117
.093	.4802
.106	.3238
.118	.3129
.131	.2432
.167	.0619
.185	.0036

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG010)

MACH (7) = 4.960 ALPHA (1) = 3.960 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.3700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.2382
.018	.2291
.020	.2958
.022	.2518
.025	.2155
.028	.2111
.030	.2125
.036	.2095
.039	.2232
.041	.2911
.044	.5572
.049	.7525
.058	.6388
.068	.5043
.077	.4213
.085	.3758
.093	.3501
.106	.2746
.118	.2637
.131	.1974
.167	.1293
.185	.1036

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G011) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = 0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = .000
PHI = .000

MACH (1) = .597 ALPHA (1) = 4 980 PO = 22.005 Q(P51) = 4 3110 RN/L = 4.9400 P = 17.297

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

016 7622
018 5209
.020 .2876
022 .4243
025 .4747
028 .4679
030 .4529
.035 .5087
.039 .5128
041 .4969
.044 .4559
.049 .4069
058 .2776
.068 .1647
077 .0787
.085 .0285
.093 -.0028
.106 - 1356
.118 - 1602
131 - 2438
167 -.4326
185 -.4804

MACH (2) = .795 ALPHA (1) = 4.980 PO = 22.018 Q(P51) = 6.4200 RN/L = 5.8900 P = 14.519

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

016 .8426
018 .5947
.020 .3495
.022 .5017
.025 .5471
.028 .5307
.030 .5086
.036 5670

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G011)

MACH (2) = .795 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.5669
.041	.5604
.044	.5231
.049	.4687
.058	.3379
.068	.2219
.077	.1255
.085	.0714
.093	.0375
.106	-.1188
.118	-.1486
.131	-.2479
.167	-.5073
.185	-.5804

MACH (3) = .898 ALPHA (1) = 4.980 PO = 22.010 Q(PSI) = 7.3520 RN/L = 6.2500 P = 13.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.8960
.018	.8552
.020	.4126
.022	.5597
.025	.5982
.028	.5804
.030	.5587
.036	.6097
.039	.6161
.041	.6091
.044	.5750
.049	.5259
.058	.3943
.068	.2719
.077	.1812
.085	.1259
.093	.0877
.106	-.0642
.118	-.0978
.131	-.2053
.167	-.4739
.185	-.5910

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G011)

MACH (4) = 1.188 ALPHA (1) = 4.980 PO = 21.997 Q(PSI) = 9.1030 RN/L = 6.6600 P = 9.2110

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.0898
.018	.8598
.020	.6293
.022	.7579
.025	.7806
.028	.7852
.030	.7697
.036	.7946
.039	.8269
.041	.8403
.044	.8099
.049	.7474
.058	.6256
.068	.5177
.077	.4397
.085	.3893
.093	.3627
.106	.2200
.118	.1988
.131	.1125
.167	-.1190
.185	-.2051

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MACH (5) = 1.452 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 9.4790 RN/L = 6.5100 P = 6.4230

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.4810
.018	.5183
.020	.5527
.022	.6200
.025	.6363
.028	.6661
.030	.6943
.036	.7388
.039	.7690
.041	.7902
.044	.7915
.049	.7796
.058	.6694
.068	.5616
.077	.4797

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G011)

MACH (5) = 1.452 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.025	.4358
.093	.4129
.106	.2789
.118	.2575
.131	.1761
.167	-.0376
.185	-.0839

MACH (6) = 1.950 ALPHA (1) = 4.970 PO = 28.036 Q(PSI) = 10.306 RN/L = 7.0600 P = 3.8720

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3341
.018	.3516
.020	.3027
.022	.3202
.025	.5169
.028	.3755
.030	.3818
.036	.4210
.032	.4871
.041	.5613
.044	.6174
.049	.6437
.058	.6338
.068	.5683
.077	.5325
.085	.4937
.093	.4427
.106	.3222
.118	.2970
.131	.2279
.167	.0480
.185	-.0044

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G011)

MACH (7) = 4.960 ALPHA (1) = 4.980 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2800 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3319
.018	.2265
.020	.3077
.022	.2170
.025	.1944
.028	.1853
.030	.2911
.036	.1792
.039	.2095
.041	.4196
.044	.4907
.049	.6751
.058	.7175
.068	.4982
.077	.4090
.085	.4242
.093	.3350
.106	.2594
.118	.3954
.131	.1883
.167	.2699
.185	.0855

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G012) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 22.500
 PHI = .000

MACH (1) = .596 ALPHA (1) = -5.040 PO = 22.014 Q(PS1) = 4 3070 RN/L = 4.9400 P = 17.310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 1.0261
 .018 .8237
 .020 .5073
 .022 .4246
 .025 .6154
 .028 .7659
 .030 .8221
 .036 .7186
 .039 .6061
 .041 .5885
 .044 .6584
 .049 .6420
 .058 .5283
 .068 .4350
 .077 .3510
 .085 .2964
 .093 .2574
 .106 .1148
 .118 .0799
 .131 -.0153
 .167 -.2543
 .185 -.3401

MACH (2) = .799 ALPHA (1) = -5.040 PO = 22.005

Q(PS1) = 6.4590

RN/L = 5.9000

P = 14.449

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 1.1092
 .018 .9084
 .020 .5762
 .022 .6032
 .025 .7308
 .028 .7805
 .030 .8566
 .036 .7781

C-2

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10012)

MACH (2) = .799 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.039	.6724
.041	.6580
.044	.7302
.049	.7130
.058	.5944
.068	.4916
.077	.4094
.085	.3491
.093	.3081
.106	.1515
.118	.1145
.131	.0024
.167	-.2861
.185	-.4028

MACH (3) = .905 ALPHA (1) = -5.060 PO = 22.001 Q(PSI) = 7.4170 RN/L = 6.2600 P = 12.938

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.1698
.018	.9593
.020	.6304
.022	.6517
.025	.7833
.028	.8227
.030	.9038
.036	.8227
.039	.7273
.041	.7204
.044	.7854
.049	.7672
.058	.6513
.068	.5428
.077	.4648
.085	.4070
.093	.3605
.106	.2044
.118	.1684
.131	.0522
.167	-.2480
.185	-.3763

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MSFC TWT 609 (1A3F) ET NOSE WITH NOSE CAP

(R10012)

MACH (4) = 1.202 ALPHA (1) = -5.040 PO = 21.997 Q(PS1) = 9.1490 RN/L = 6.6600 P = 9.0490

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.3403
.018	1.1270
.020	.8236
.022	.8536
.025	.9980
.028	1.0322
.030	1.0848
.036	1.0221
.039	.9325
.041	.9191
.044	.9874
.049	.9693
.058	.8599
.068	.7658
.077	.6917
.085	.6387
.093	.6042
.106	.4598
.118	.4328
.131	.3348
.167	.0822
.185	-.0259

MACH (5) = 1.456 ALPHA (1) = -5.040 PO = 22.005 Q(PS1) = 9.4760 RN/L = 6.5400 P = 6.3830

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.7805
.018	1.2932
.020	.8000
.022	.6612
.025	.8364
.028	.8433
.030	1.0188
.036	1.0621
.039	.9711
.041	.9760
.044	1.0584
.049	1.0331
.058	.8939
.068	.7980
.077	.7339

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R19012)

MACH (5) = 1.456 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	.6780
.093	.6543
.106	.5000
.118	.4776
.131	.3968
.167	.1588
.185	.0551

MACH (C) = 1.955 ALPHA (1) = -5.040 PO = 28.024 Q(PSI) = 10.276 RN/L = 7.0600 P = 3.8420

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.8050
.018	1.7044
.020	.8975
.022	.3334
.025	.3642
.028	.3494
.030	.4702
.036	.6773
.039	.8486
.041	.8904
.044	1.0755
.049	1.0362
.058	.8911
.068	.7868
.077	.7416
.085	.7068
.093	.6762
.106	.5148
.118	.5021
.131	.4078
.167	.2087
.185	.1211

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G012)

MACH (7) = 4.960 ALPHA (1) = -5.040 PO = 74.928 O(PS1) = 2.5550 RN/L = 4.3500 P = .14800

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22 5000

X/L

.016	.2281
.018	3 1500
.020	.6196
.022	.2730
.025	.2552
.028	.2218
.030	.3250
.036	.4127
.039	.4699
.041	.5249
.044	.7927
.049	.7664
.058	.6960
.068	.7276
.077	.6998
.085	.6370
.093	.6095
.106	.4865
.118	.4280
.131	.3567
.167	.2160
.185	.1674

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16013) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 95633 5996 SQ.IN XMRP = 0000 IN XT
LREF = 330 2000 IN. YMRP = .0000 IN YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = 000 THETA = 22.500
PHI = 000

MACH (1) = .597 ALPHA (1) = -4.040 PO = 22.010 Q(PSI) = 4.3120 RN/L = 4.9300 P = 17.300

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

016 1.0204
018 .8077
.020 4758
022 5361
025 6539
.028 .7273
030 7854
036 6915
039 .5881
.041 .5729
.044 6413
049 6186
058 .5020
063 4057
.077 3240
.085 .2679
093 2328
106 .0869
118 .0553
131 - .0386
.157 -.2764
185 - 3540

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MACH (2) = 799 ALPHA (1) = -4.040 PO = 22.005 Q(PSI) = 6.4600 RN/L = 5.9000 P = 14.446

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

016 1.1004
018 .8870
020 5427
.022 .6010
025 .7188
028 7619
.030 8270
036 7571

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G013)

MACH (2) = .799 ALPHA (1) = -4.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22 5000

X/L

.039	.6571
.041	.6410
.044	.7118
.049	.6856
.058	.5698
.068	.4624
.077	.3797
.085	.3246
.093	.2815
.106	.1245
.118	.0914
.131	-.0233
.167	-.3063
.185	-.4241

MACH (3) = .912 ALPHA (1) = -4.060 PO = 22 010 Q(PSI) = 7.4760 RN/L = 6 2800 P = 12.848

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22 5000

X/L

.016	.11595
.018	.9386
.020	.5968
.022	.6497
.025	.7954
.028	.8419
.030	.8962
.036	.8146
.039	.7183
.041	.7049
.044	.7711
.049	.7457
.058	.6289
.068	.5257
.077	.4406
.085	.3958
.093	.3449
.106	.1870
.118	.1499
.131	.0379
.167	-.2596
.185	-.3892

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16013)

MACH (4) = 1.200 ALPHA (1) = -4.060 PO = 22.010 Q(PSI) = 9.1500 RN/L = 6.6600 P = 9.0710

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

016	1.3340
.018	1.1256
020	.7899
022	.8495
.025	.9810
.028	1.0158
030	1.0707
.036	1.0055
039	.9194
.041	.9058
044	.9692
049	.9447
058	.8360
068	.7406
077	.6660
085	.6145
.093	.5808
.106	.4347
.118	.4095
.131	.3134
.167	.0628
.185	-.0431

MACH (5) = 1.457 ALPHA (1) = -4.070 PO = 21.997 Q(PSI) = 9.4720 RN/L = 6.5200 P = 6.3730

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

016	.6301
018	1.1569
020	.7993
022	.6466
.025	.8303
028	.8405
030	1.0016
.036	1.0421
039	.9581
041	.9656
044	1.0421
049	1.0217
058	.8725
.068	.7731
077	.7095

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G013)

MACH (5) = 1.457 ALPHA (1) = -4.070

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	6563
.093	6319
.106	.4792
.118	4569
.131	.3747
.167	1365
.185	0396

MACH (6) = 1.953 ALPHA (1) = -4.060 PO = 28.024 Q(PSI) = 10.287 RN/L = 7.0500 P = 3.8540

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	6093
.018	1 4893
.020	9211
.022	.2948
.025	.3584
.028	3453
.030	4601
.036	6665
.039	8305
.041	8676
.044	1.0273
.049	9937
.058	.8624
.068	.7587
.077	.7230
.085	6943
.093	.6560
.106	4979
.118	4785
.131	4006
.167	1905
.185	1083

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G013)

MACH (7) = 4.960 ALPHA (1) = -4.060 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2500 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

016	.2397
018	3.0442
020	.7341
.022	.3168
.025	.2458
.028	.2095
030	.3229
.036	.3697
039	.4332
041	.5134
044	.7764
049	.7507
.058	.6691
068	.6751
.077	.6660
085	.6252
.093	.5820
.106	.4635
118	.4408
131	.3440
.167	.2563
.185	.1535

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G014) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 22.500
 PHI = .000

MACH (1) = 596 ALPHA (1) = -3.060 PO = 22.005 Q(PSI) = 4.3000 RN/L = 4.9200 P = 17.310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 1.0174
 .018 .7913
 .020 .4406
 .022 .5335
 .025 .6315
 .028 .7205
 .030 .7758
 .036 .6755
 .039 .5760
 .041 .5567
 .044 .6181
 .049 .5959
 .058 .4785
 .068 .3785
 .077 .2988
 .085 .2477
 .093 .2089
 .106 .0640
 .118 .0357
 .131 -.0629
 .167 -.2929
 .185 -.3733

MACH (2) = .800 ALPHA (1) = -3.060 PO = 22.014 Q(PSI) = 6.4700 RN/L = 5.9100 P = 14.441

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 1.1010
 .018 .8687
 .020 .5074
 .022 .5965
 .025 .7004
 .028 .7494
 .030 .8133
 .036 .7411

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16014)

MACH (2) = .800 ALPHA (1) = -3.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.039	.6448
.041	.6243
.044	.6915
.049	.6628
.058	.5423
.068	.4368
.077	.3531
.085	.2965
.093	.2537
.106	.0991
.118	.0639
.131	-.0460
.167	-.3332
.185	-.4429

MACH (3) = .912 ALPHA (1) = -3.060 P0 = 22.010 Q(PSI) = 7.4820 RN/L = 6.2900 P = 12.838

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.1612
.018	.9204
.020	.5629
.022	.6447
.025	.7815
.028	.8264
.030	.8798
.036	.7996
.039	.7080
.041	.6874
.044	.7479
.049	.7230
.058	.6015
.068	.4960
.077	.4172
.085	.3590
.093	.3196
.106	.1574
.118	.1247
.131	.0124
.167	-.2895
.185	-.4121

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G014)

MACH (4) = 1.200 ALPHA (1) = -3.060 PO = 22.001 Q(PST) = 9.1460 RN/L = 6.6600 P = 9.0690

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.3360
.018	1.1112
.020	.7895
.022	.8386
.025	.8132
.028	.8140
.030	1.1365
.036	1.0195
.039	.9037
.041	.8866
.044	.9371
.049	.9088
.058	.8066
.068	.7134
.077	.6430
.085	.5914
.093	.5591
.106	.4082
.118	.3872
.131	.2920
.167	.0417
.185	-.0618

MACH (5) = 1.459 ALPHA (1) = -3.060 PO = 21.997 Q(PST) = 9.4720 RN/L = 6.5200 P = 6.3600

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.5286
.018	.9947
.020	.7928
.022	.6490
.025	.8242
.028	.8377
.030	.9650
.036	1.0174
.039	.9476
.041	.9515
.044	1.0297
.049	1.0060
.058	.8470
.068	.7495
.077	.6878

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10014)

MACH (5) = 1.459 ALPHA (1) = -3.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	.6319
.093	.6130
.106	.4599
.118	.4335
.131	.3533
.167	.1159
.185	.0253

MACH (5) = 1.951 ALPHA (1) = -3.060 PO = 28.015 Q(PSI) = 10.294 RN/L = 7.0600 P = 3.8640

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.4921
.018	.2051
.020	.9244
.022	.2506
.025	.3485
.028	.3554
.030	.4283
.036	.6560
.039	.8179
.041	.8468
.044	.9925
.049	.9575
.058	.8400
.068	.7352
.077	.7155
.085	.6736
.093	.6383
.106	.4840
.118	.4546
.131	.3942
.167	.1728
.185	.0953

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG014)

MACH (7) = 4.960 ALPHA (1) = -3.060 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2442
.018	1.0485
.020	1.3796
.022	.3350
.025	.2533
.028	.2291
.030	.3153
.036	.2820
.039	.3712
.041	.4242
.044	.6857
.049	.6933
.058	.6177
.068	.6237
.077	.6358
.085	.6010
.093	.5723
.106	.4468
.118	.4166
.131	.3229
.167	.2321
.185	.1384

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G015) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 22.500
PHI = .000

MACH (1) = 597 ALPHA (1) = -2.020 PO = 22.014 Q(PSI) = 4.3130 RN/L = 4.9300 P = 17.302

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 1.0230
.018 .7789
.020 .4639
.022 .5214
.025 .4983
.028 .4478
.030 .7515
.036 .6878
.039 .5544
.041 .5329
.044 .5890
.049 .5544
.058 .4442
.068 .3474
.077 .2686
.085 .2193
.093 .1839
.106 .0356
.118 .0087
.131 -.0881
.167 -.3173
.185 -.3953

MACH (2) = .799 ALPHA (1) = -2.020 PO = 22.010 Q(PSI) = 6.4570 RN/L = 5.9100 P = 14.456

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 1.1103
.018 .8550
.020 .5379
.022 .5858
.025 .5753
.028 .5103
.030 .7721
.036 .7285

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG015)

MACH (2) = .799 ALPHA (1) = -2.020

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.039	.6175
.041	.5995
.044	.6561
.049	.6223
.058	.5084
.068	.4017
.077	.3246
.085	.2703
.093	.2286
.106	.0646
.118	.0383
.131	-.0760
.167	-.3597
.185	-.4687

MACH (3) = .901 ALPHA (1) = -2.040 PO = 22.010 Q(PSI) = 7.3900 RN/L = 6.2700 P = 12.993

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.1610
.018	.9069
.020	.5917
.022	.6322
.025	.6278
.028	.5635
.030	.8144
.036	.7899
.039	.6733
.041	.6566
.044	.7125
.049	.6822
.058	.5664
.068	.4604
.077	.3858
.085	.3279
.093	.2894
.106	.1218
.118	.0935
.131	-.0176
.167	-.3206
.185	-.4413

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16015)

MACH (4) = 1.202 ALPHA (1) = -2.040 PO = 22.014 Q(PSI) = 9.1580 RN/L = 6.6800 P = 9.0490

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.3529
.018	1.0984
.020	.7968
.022	.8291
.025	.8346
.028	.7883
.030	.9773
.036	.9701
.039	.8749
.041	.8666
.044	.9224
.049	.8901
.058	.7868
.068	.6864
.077	.6177
.085	.5697
.093	.5365
.106	.3833
.118	.3669
.131	.2713
.167	.0259
.185	-.0795

MACH (5) = 1.460 ALPHA (1) = -2.040 PO = 22.001 Q(PSI) = 9.4730 RN/L = 6.5200 P = 6.3500

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.4558
.018	.8618
.020	.7642
.022	.6662
.025	.8193
.028	.8365
.030	.9321
.036	.9902
.039	.9345
.041	.9390
.044	1.0147
.049	.9852
.058	.8263
.068	.7242
.077	.6645

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G015)

MACH (5) = 1.460 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	.6106
.093	.5912
.106	.4390
.118	.4117
.131	.3317
.167	.0980
.185	.0110

MACH (6) = 1.949 ALPHA (1) = -2.040 PO = 28 011 Q(PSI) = 10 302 RN/L = 7.0600 P = 3.8740

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.4032
.018	.9721
.020	.8799
.022	.2195
.025	.3400
.028	.3793
.030	.4265
.036	.6467
.039	.8089
.041	.8279
.044	.9537
.049	.9164
.058	.8203
.068	.7067
.077	.7019
.085	.6495
.093	.6148
.106	.4657
.118	.4325
.131	.3753
.167	.1532
.185	.0822

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G015)

MACH (7) = 4.960 ALPHA (1) = -2.040 PO = 75.019 Q(PSI) * 2.5580 RN/L = 4.1400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2896
.018	.4542
.020	1.2542
.022	.3486
.025	.2820
.028	.2684
.030	.3350
.036	.2911
.039	.3607
.041	.4362
.044	.5799
.049	.6162
.058	.6101
.068	.5935
.077	.6056
.085	.5814
.093	.5451
.106	.4287
.118	.4393
.131	.3093
.167	.2669
.185	.1293

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10016) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = 0000 IN XT
 LREF = 330 2000 IN. YMRP = .0000 IN YT
 BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = 22.500
 PHI = .000

MACH (1) = .596 ALPHA (1) = -1.040 PC = 22.010 Q(PS1) = 4.3040 RN/L = 4.9300 P = 17.310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22 5000

X/L

.016 1 0091
 .018 7597
 .020 4492
 .022 4998
 .025 5118
 .028 4788
 .030 6727
 .036 6438
 .039 5319
 .041 5125
 .044 5692
 .049 5363
 .058 4235
 .068 3195
 .077 2452
 .085 1941
 .093 1597
 .106 0098
 .118 - 0144
 .131 - 1079
 .167 - 3356
 .185 - 4043

MACH (2) = .799 ALPHA (1) = -1.040 PO = 22.010 Q(PS1) = 6.4600 RN/L = 5.9200 P = 14.451

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22 5000

X/L

.016 1.1025
 .018 8352
 .020 5172
 .022 5649
 .025 5788
 .028 5507
 .030 7116
 .036 7020

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16016)

MACH (2) = .799 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22 5000

X/L

039	5968
041	5815
044	5380
.049	.6034
058	4874
068	3779
.077	2999
.085	2476
.093	.2104
106	.0437
118	.0143
.131	-.0928
167	- 3830
185	- 4809

MACH (3) = .899 ALPHA (1) = -1.040 P0 = 22.014 Q(PSI) = 7.3740 RN/L = 6.2800 P = 13.025

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22 5000

X/L

016	1.1568
018	.8917
.020	5651
022	6139
025	.6305
.028	5961
.030	7549
036	7510
.039	6461
041	6371
.044	6913
.049	6535
.058	5434
.068	4309
.077	3504
.085	3032
.093	.2637
.106	0883
.118	0687
.131	- 0417
.167	- 3505
.185	- 4599

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG016)

MACH (4) = 1.201 ALPHA (1) = -1.040 PO = 22.001 Q(PSI) = 9.1500 RN/L = 6.6800 P = 9.0560

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.3283
.018	1.0900
.020	.7709
.022	.8006
.025	.8386
.028	.8238
.030	.9578
.036	.9481
.039	.8618
.041	.8461
.044	.9032
.049	.8702
.058	.7607
.068	.6619
.077	.5935
.085	.5442
.093	.5156
.106	.3623
.118	.3445
.131	.2531
.167	.0023
.185	-.0952

MACH (5) = 1.459 ALPHA (1) = -1.040 PO = 22.001 Q(PSI) = 9.4730 RN/L = 6.5300 P = 6.3600

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.4037
.018	.7131
.020	.7176
.022	.6833
.025	.8132
.028	.8360
.030	.9046
.036	.9590
.039	.9185
.041	.9193
.044	.9998
.049	.9663
.058	.8025
.068	.7025
.077	.6417

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG016)

MACH (5) = 1.459 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22 5000

X/L

.085	5854
.093	.5722
.106	.4155
.118	.3894
.131	.3128
.167	.0792
.185	-.0073

MACH (6) = 1.948 ALPHA (1) = -1.040 P0 = 28.015 Q(PSI) = 10.310 RN/L = 7.0700 P = 3.8820

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22 5000

X/L

.016	.3337
.018	.7734
.020	.7889
.022	.2041
.025	.3311
.028	.3946
.030	.4365
.036	.6412
.039	.7978
.041	.8141
.044	.9123
.049	.8750
.058	.8073
.068	.6878
.077	.6869
.085	.6227
.093	.5951
.106	.4456
.118	.4159
.131	.3529
.167	.1359
.185	.0698

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G016)

MACH (7) = 4.960 ALPHA (1) = -1.060 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.1100 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.4090
.018	.2896
.020	.5967
.022	.3051
.025	.3697
.028	.3547
.030	.4015
.036	.4423
.039	.5241
.041	.5345
.044	.5481
.049	.5619
.058	.6192
.068	.6056
.077	.6406
.085	.6162
.093	.6237
.106	.5967
.118	.5134
.131	.4000
.167	.3380
.185	.2473

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G017) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = 0000 IN. XT
LREF = 330.2000 IN. YMRP = 0000 IN. YT
BREF = 330.2000 IN. ZMRP = 0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 22.500
PHI = .000

MACH (1) = .597 ALPHA (1) = - 040 PO = 22.018 Q(PSI) = 4.3130 RN/L = 4.9400 P = 17.307

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 .9711
.018 .7319
.020 .4061
.022 .4428
.025 .4953
.028 .5004
.030 .6584
.036 .6216
.039 .5094
.041 .4890
.044 .5383
.049 .5076
.058 .3931
.068 .2874
.077 .2129
.085 .1673
.093 .1324
.106 -.0162
.118 -.0386
.131 -.1318
.167 -.3558
.185 -.4212

MACH (2) = .798 ALPHA (1) = -.040 PO = 22.014 Q(PSI) = 6.4490 RN/L = 5.9200 P = 14.471

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

Y/L

.016 1.0560
.018 .8156
.020 .4675
.022 .4876
.025 .5700
.028 .5711
.030 .7188
.036 .6908

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG017)

MACH (2) = .798 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.039	5789
.041	.5562
.044	.6091
.049	.5777
.058	.4596
.068	.3466
.077	.2718
.085	.2184
.093	.1845
.106	.0179
.118	-.0041
.131	-.1181
.167	-.4055
.185	-.5013

MACH (3) = .901 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 7.3870 RN/L = 6.2900 P = 12.998

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.1188
.018	.8708
.020	.5226
.022	.5545
.025	.6258
.028	.6205
.030	.7596
.036	.7405
.039	.6326
.041	.6154
.044	.6667
.049	.6321
.058	.5171
.068	.4052
.077	.3281
.085	.2756
.093	.2401
.106	.0703
.118	.0424
.131	-.0653
.167	-.3658
.185	-.4766

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G017)

MACH (4) = 1.200 ALPHA (1) = -.040 PO = 22 010 Q(PSI) = 9.1490 RN/L = 6.7000 P = 9.0740

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 1.2670
.018 1.0623
.020 7266
.022 7576
.025 8417
.028 .8390
.030 9481
.036 .9339
.039 .8441
.041 .8263
.044 8777
.049 8449
.058 7358
.068 .6354
.077 5669
.085 5193
.093 4925
.06 3379
.116 .3192
.131 2312
.167 - 0207
.185 - 1134

MACH (5) = 1.459 ALPHA (1) = - 040 PO = 22.005 Q(PSI) = 9.4750 RN/L = 6.5400 P = 6.3580

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 3939
.018 6111
.020 6707
.022 7045
.025 7932
.028 .8303
.030 .8785
.036 .9189
.039 .8989
.041 .8985
.044 .9736
.049 .9405
.058 .7854
.068 .6813
.077 6213

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G017)

MACH (5) = 1.459 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	.5662
.093	.5515
.106	.3943
.118	.3682
.131	.2910
.167	.0640
.185	-.0232

MACH (6) = 1.946 ALPHA (1) = -.040 PO = 28.007 Q(PSI) = 10.319 RN/L = 7.0800 P = 3.8940

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2949
.018	.5803
.020	.6757
.022	.2021
.025	.3205
.028	.4147
.030	.4482
.036	.6271
.039	.7807
.041	.7892
.044	.8535
.049	.8392
.058	.7817
.058	.6819
.077	.6697
.085	.6003
.093	.5799
.106	.4252
.118	.4145
.131	.3261
.167	.1185
.185	.0555

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16017)

MACH (7) = 4.960 ALPHA (1) = -.040 PO = 75 019 Q(PSI) = 2.5580 RN/L = 4.3500 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2579
.018	.2654
.020	.7432
.022	.3818
.025	.3259
.028	.3244
.030	.3229
.036	.3183
.039	.3531
.041	.3531
.044	.3985
.049	.4771
.058	.4695
.068	.5360
.077	.5315
.085	.4967
.093	.4816
.106	.3803
.118	.4226
.131	.2654
.167	.1596
.185	.1263

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 603 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G018) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = 22.500
 PHI = .000

MACH (1) = 598 ALPHA (1) = 980 PO = 22.014 Q(PSI) = 4.3320 RN/L = 4.9500 P = 17.280

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 .9243
 .018 .6772
 .020 .3672
 .022 .3554
 .025 .4991
 .028 .5103
 .030 .6330
 .036 .6045
 .039 .4906
 .041 .4735
 .044 .5161
 .049 .4799
 .058 .3711
 .068 .2597
 .077 .1892
 .085 .1501
 .093 .1105
 .106 -.0387
 .118 -.0556
 .131 -.1539
 .167 -.3692
 .185 -.4380

MACH (2) = .800 ALPHA (1) = .960 PO = 22.010 Q(PSI) = 6.4670 RN/L = 5.9200 P = 14.441

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 .9953
 .018 .7566
 .020 .4279
 .022 .4334
 .025 .5711
 .028 .5745
 .030 .6889
 .036 .6663

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G01B)

MACH (2) = .800 ALPHA (1) = .530

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.039	.5572
.041	.5390
.044	.5837
.049	.5494
.058	.4357
.068	.3172
.077	.2423
.085	.1950
.093	.1574
.106	-.0120
.118	-.0318
.131	-.1418
.167	-.4223
.185	-.5190

MACH (3) = .909 ALPHA (1) = .960 PO = 22.005 Q(PSI) = 7.4480 RN/L = 6.2700 P = 12.890

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.0635
.018	.8203
.020	.4928
.022	.5059
.025	.6284
.028	.6222
.030	.7263
.036	.7194
.039	.6180
.041	.5987
.044	.6471
.049	.6103
.058	.4929
.068	.3827
.077	.3073
.085	.2558
.093	.2226
.106	.0506
.118	.0234
.131	-.0808
.167	-.3790
.185	-.4804

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10018)

MACH (4) = 1.200 ALPHA (1) = .960 PO = 22.014 Q(PSI) = 9.1520 RN/L = 6.6600 P = 9.0710

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.2150
.018	1.0196
.020	.6963
.022	.7299
.025	.8274
.028	.8289
.030	.9164
.036	.9124
.039	.8280
.041	.8069
.044	.8557
.049	.8225
.058	.7113
.068	.6097
.077	.5467
.085	.4985
.093	.4724
.106	.3183
.118	.2985
.131	.2116
.167	- .0377
.185	- .1289

MACH (5) = 1.453 ALPHA (1) = .960 PO = 22.005 Q(PSI) = 9.4780 RN/L = 6.5300 P = 6.4150

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.3915
.018	.5587
.020	.6498
.022	.7013
.025	.7771
.028	.8180
.030	.8539
.036	.8849
.039	.8726
.041	.8690
.044	.9318
.049	.9028
.058	.7625
.068	.6604
.077	.5943

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G018)

MACH (5) = 1.453 ALPHA (1) = .960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	.5409
.093	.5290
.106	.3715
.118	.3450
.131	.2670
.167	.0479
.185	-.0491

MACH (6) = 1.952 ALPHA (1) = .960 PO = 28.028 Q(PSI) = 10.293 RN/L = 7.0700 P = 3.8590

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	2962
.018	4345
.020	5477
.022	2080
.025	3221
.028	4056
.030	4342
.036	5842
.039	7255
.041	7304
.044	7847
.049	7808
.058	7285
.068	6462
.077	6466
.085	5808
.093	5414
.106	4007
.118	3717
.131	3097
.167	1033
.185	0398

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G018)

MACH (7) = 4.960 ALPHA (1) = .960 PO = 75.011 Q(PS1) = 2.5580 RN/L = 4.2400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2822
.018	.2609
.020	.3954
.022	.3743
.025	.3153
.028	.3108
.030	.3336
.036	.3093
.039	.3365
.041	.3759
.044	.3637
.049	.4226
.058	.4651
.068	.5103
.077	.4997
.085	.4848
.093	.4635
.106	.3607
.118	.3532
.131	.2563
.167	.2035
.185	.1006

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G019) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 22.500
PHI = .000

MACH (1) = 598 ALPHA (1) = 1.980 PO = 22.010 Q(PSI) = 4.3260 RN/L = 4.9400 P = 17.282

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 .8788
.018 .6714
.020 .3544
.022 .3973
.025 .4799
.028 .4830
.030 .5604
.036 .5595
.039 .4616
.041 .4441
.044 .4942
.049 .4527
.058 .3377
.068 .2295
.077 .1596
.085 .1213
.093 .0882
.106 -.0637
.118 -.0817
.131 -.1720
.167 -.3893
.185 -.4448

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MACH (2) = .798 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 6.4450 RN/L = 5.9100 P = 14.469

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 .9668
.018 .7553
.020 .4102
.022 .4774
.025 .5479
.028 .5465
.030 .6155
.036 .6259

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16019)

MACH (2) = .798 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.039	.5285
.041	.5086
.044	.5635
.049	.5224
.058	.3987
.068	.2865
.077	.2132
.085	.1640
.093	.1342
.106	-.0395
.118	-.0617
.131	-.1642
.167	-.4496
.185	-.5329

MACH (3) = 905 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 7.4220 RN/L = 6.2600 P = 12 935

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.0387
.018	.8166
.020	.4743
.022	.5317
.025	.6022
.028	.6000
.030	.6693
.036	.6763
.039	.5912
.041	.5746
.044	.6225
.049	.5839
.058	.4633
.068	.3454
.077	.2772
.085	.2307
.093	.1930
.106	.0233
.118	-.0007
.131	-.1100
.167	-.4034
.185	-.5129

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G019)

MACH (4) = 1.199 ALPHA (1) = 1.960 PO = 22.010 Q(PSI) = 9.1450 RN/L = 6.6600 P = 9.0890

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.2022
.018	1.0095
.020	.6835
.022	.7457
.025	.8037
.028	.7995
.030	.8616
.036	.8747
.039	.8003
.041	.7868
.044	.8367
.049	.7973
.058	.6882
.068	.5827
.077	.5184
.085	.4788
.093	.4517
.106	.2933
.118	.2791
.131	.1926
.167	-.0550
.185	-.1441

MACH (5) = 1.448 ALPHA (1) = 1.960 PO = 22.010 Q(PSI) = 9.4820 RN/L = 6.5300 P = 6.4580

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.4115
.018	.5154
.020	.6291
.022	.7045
.025	.7604
.028	.7930
.030	.8257
.036	.8603
.039	.8440
.041	.8375
.044	.8869
.049	.8676
.058	.7367
.068	.6388
.077	.5712

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G019)

MACH (5) = 1.448 ALPHA (1) = 1.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	.5184
.093	.5062
.106	.3501
.118	.3202
.131	.2410
.167	.0182
.185	-.0592

MACH (6) = 1.950 ALPHA (1) = 1.960 PO = 28.019 Q(PSI) = 10.300 RN/L = 7.0600 P = 3.8690

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2985
.018	.3456
.020	.4369
.022	.2229
.025	.3184
.028	.4038
.030	.4261
.036	.5703
.039	.7048
.041	.7032
.044	.7329
.049	.7363
.058	.6893
.068	.6281
.077	.6251
.085	.5575
.093	.5271
.106	.3832
.118	.3555
.131	.2895
.167	.0863
.185	.0293

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG019)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1800 P = .14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2775
.018	.2624
.020	.2805
.022	.3516
.025	.2805
.028	.2805
.030	.3002
.036	.2775
.039	.3093
.041	.3425
.044	.3470
.049	.3879
.058	.4242
.068	.4680
.077	.4725
.085	.4619
.093	.4408
.106	.3455
.118	.3319
.131	.2337
.167	.1883
.185	.0855

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G020) (28 AUG 75)

REFERENCE DATA

SHEF = 85633 5996 SQ. IN. XMRP = 0000 IN. XT
 LREF = 330.2000 IN. YMRP = 0000 IN. YT
 BREF = 330.2000 IN. ZMRP = 0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 22.500
 PHI = .000

MACH (1) = 597 ALPHA (1) = 2.980 PO = 22.014 Q(PSI) = 4.3200 RN/L = 4.9400 P = 17.295

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

016	8645
.018	.6723
020	.3585
022	.4722
025	.4749
028	.4659
.030	4875
036	4992
039	4256
041	4125
044	.4704
.049	.4238
.058	.3052
068	1983
077	1296
.085	0926
.093	.0636
106	-.0887
118	- 1074
.131	- 1959
.167	-.4067
185	- 4636

MACH (2) = .797 ALPHA (1) = 2.960 PO = 22.001 Q(PSI) = 6.4420 RN/L = 5.9100 P = 14.469

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.9558
.018	.7484
020	.4209
022	5405
025	3391
028	5292
030	5565
.036	.5672

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10020)

MACH (2) = .797 ALPHA (1) = 2.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.039	.4955
.041	.4863
.044	.5445
.049	.4973
.058	.3752
.068	.2605
.077	.1831
.085	.1440
.093	.1095
.106	-.0636
.118	-.0804
.131	-.1869
.167	-.4635
.185	-.5487

MACH (3) = 906 ALPHA (1) = 2.980 PO = 22.010 Q(PSI) = 7.4300 RN/L = 6.2700 P = 12.925

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.0218
.018	.8030
.020	.4810
.022	.5972
.025	.5184
.028	.5452
.030	.4103
.036	.6233
.039	.5586
.041	.5452
.044	.6051
.049	.5597
.058	.4347
.068	.3234
.077	.2485
.085	.2024
.093	.1722
.106	-.0010
.118	-.0277
.131	-.1291
.167	-.4256
.185	-.5256

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G020)

MACH (4) = 1.196 ALPHA (1) = 2.980 PO = 22.022 Q(PSI) = 9.1400 RN/L = 6.6700 P = 9.1290

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22 5000

X/L

.016	1 1911
.018	9980
.020	6918
.022	7961
.025	.7989
.028	7917
.030	8095
.036	.8260
.039	7731
.041	7595
.044	.8175
.049	.7760
.058	6604
.068	.5612
.077	.4963
.085	4529
.093	.4306
.106	2729
.118	.2546
.131	.1730
.167	-.0756
.185	-.1601

MACH (5) = 1.455 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 9.4770 RN/L = 6.5100 P = 6.4000

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.4343
.018	.5123
.020	.5911
.022	6690
.025	.7094
.028	.7441
.030	.7739
.036	8270
.039	.8163
.041	.8090
.044	.8400
.049	.8274
.058	7119
.068	.6237
.077	.5543

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G020)

MACH (5) = 1.455 ALPHA (1) = 2.980

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	.4988
.093	.4870
.106	.3343
.118	.3029
.131	.2319
.167	.0156
.185	-.0749

MACH (6) = 1.951 ALPHA (1) = 2.980 PO = 28.019 Q(PSI) = 10.295 RN/L = 7.0500 P = 3.8640

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.3011
.018	.3171
.020	.3531
.022	.2586
.025	.3214
.028	.3940
.030	.4112
.036	.5454
.039	.6743
.041	.6748
.044	.6766
.049	.6953
.058	.6530
.068	.6037
.077	.5970
.085	.5353
.093	.5108
.106	.3624
.118	.3451
.131	.2710
.167	.0732
.185	.0176

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G020)

MACH (7) = 4.960 ALPHA (1) = 2.980 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2790
.018	.2442
.020	.2609
.022	.2533
.025	.2412
.028	.2352
.030	.2745
.036	.2427
.039	.2790
.041	.3289
.044	.3410
.049	.3697
.058	.4045
.068	.4242
.077	.4408
.085	.4393
.093	.4186
.106	.3244
.118	.3289
.131	.2170
.167	.1944
.185	.0810

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 101

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG021) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ. IN. XMRP = 0000 IN. XT
LREF = 330.2000 IN YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

PARAMETRIC DATA

BETA = .000 THETA = 22 500
PHI = .000

MACH (1) = .598 ALPHA (1) = 3.960 PO = 22.005 Q(PSI) = 4.3230 RN/L = 4.9400 P = 17.282

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 .8671
.018 .6466
.020 .3517
.022 .4750
.025 .4727
.028 .4529
.030 .4584
.036 .4647
.039 .4009
.041 .3896
.044 .4396
.049 .3955
.058 .2760
.068 .1713
.077 .1027
.095 .0721
.093 .0426
.106 -.1095
.118 -.1246
.131 -.2149
.167 -.4215
.185 -.4734

MACH (2) = .795 ALPHA (1) = 3.960 PO = 22.014 Q(PSI) = 6.4240 RN/L = 5.9100 P = 14.509

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 .9363
.018 .7223
.020 .4150
.022 .5451
.025 .5369
.028 .5179
.030 .5228
.036 .5315

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16021)

MACH (2) = .795 ALPHA (1) = 3.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.039	.4674
.041	.4535
.044	.5128
.049	.4662
.058	.3403
.068	.2309
.077	.1543
.085	.1122
.093	.0851
.106	-.0888
.118	-.1123
.131	-.2106
.167	-.4915
.185	-.5648

MACH (3) = .904 ALPHA (1) = 3.960 PO = 21.997 Q(PSI) = 7.4100 RN/L = 6.2600 P = 12.945

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.015	1.0126
.018	.7759
.020	.4749
.022	.5949
.025	.5936
.028	.5771
.030	.5818
.036	.5879
.039	.5317
.041	.5170
.044	.5738
.049	.5317
.058	.4036
.068	.2936
.077	.2235
.085	.1772
.093	.1475
.106	-.0241
.118	-.0522
.131	-.1535
.167	-.4484
.185	-.5439

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (T43F)

PAGE 103

MSFC TWT 609 (T43F) ET NOSE WITH NOSE CAP

(R16021)

MACH (4) = 1.191 ALPHA (1) = 3.960 PO = 22.014 Q(PSI) = 9.1200 RN/L = 6.6700 P = 9.1840

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.1872
.018	.9707
.020	.6864
.022	.7942
.025	.7947
.028	.7810
.030	.7879
.036	.7934
.039	.7471
.041	.7357
.044	.7866
.049	.7483
.058	.6336
.068	.5321
.077	.4713
.085	.4326
.093	.4070
.106	.2510
.118	.2359
.131	.1513
.167	-.0929
.185	-.1790

MACH (5) = 1.449 ALPHA (1) = 3.960 PO = 22.005 Q(PSI) = 9.4800 RN/L = 6.5200 P = 6.4550

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.4487
.018	.5024
.020	.5711
.022	.6408
.025	.6669
.028	.7041
.030	.7347
.036	.8006
.039	.7893
.041	.7824
.044	.8004
.049	.7857
.058	.6808
.068	.5939
.077	.5315

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 104

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16021)

MACH (5) = 1.449 ALPHA (1) = 3.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	.4793
.093	.4638
.106	.3136
.118	.2850
.131	.2018
.167	-.0111
.185	-.0906

MACH (6) = 1.953 ALPHA (1) = 3.960 PO = 28.019 Q(PSI) = 10.284 RN/L = 7.0500 P = 3.8520

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.3071
.018	.3103
.020	.3058
.022	.2763
.025	.3264
.028	.3755
.030	.3939
.036	.5212
.039	.6412
.041	.6428
.044	.6280
.049	.6464
.058	.6187
.068	.5798
.077	.5719
.085	.5131
.093	.4899
.106	.3476
.118	.3353
.131	.2526
.167	.0623
.185	.0059

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G021)

MACH (7) = 4.960 ALPHA (1) = 3.960 PO = 75.003 Q(P51) = 2.5580 RN/L = 4.3400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2384
.018	.2412
.020	.2881
.022	.2956
.025	.2034
.028	.2004
.030	.2127
.036	.2140
.039	.2518
.041	.2586
.044	.3077
.049	.3410
.058	.3428
.068	.3803
.077	.4090
.085	.3957
.093	.3924
.106	.3002
.118	.3730
.131	.2064
.167	.1401
.185	.1067

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG022) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 22.500
 PHI = .000

MACH (1) = .597 ALPHA (1) = 4.980 PO = 22.010 Q(PSI) = 4.3160 RN/L = 4.5400 P = 17.295

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 .8444
 .018 .6117
 .020 .3137
 .022 .4596
 .025 .4984
 .028 .4688
 .030 .4301
 .036 .4841
 .039 .3980
 .041 .3630
 .044 .3926
 .049 .3513
 .058 .2431
 .068 .1468
 .077 .0742
 .085 .0436
 .093 .0177
 .106 -.1365
 .118 -.1496
 .131 -.2378
 .167 -.4413
 .185 -.4899

MACH (2) = .792 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 6.3870 RN/L = 5.9200 P = 14.554

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016 .9314
 .018 .6860
 .020 .3996
 .022 .5293
 .025 .5266
 .028 .4954
 .030 .4977
 .036 .5041

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16022)

MACH (2) = .792 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.039	.4396
.041	.4263
.044	.4738
.049	.4293
.058	.3065
.068	.1992
.077	.1276
.085	.0900
.093	.0592
.106	-.1128
.118	-.1313
.131	-.2341
.167	-.5064
.185	-.5790

MACH (3) = .899 ALPHA (1) = 4.980 PO = 22.010 Q(PST) = 7.3720 RN/L = 6 2600 P = 13.023

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.9914
.018	.7399
.020	.4578
.022	.5799
.025	.5808
.028	.5490
.030	.5491
.036	.5599
.039	.4966
.041	.4801
.044	.5342
.049	.4882
.058	.3637
.068	.2619
.077	.1844
.085	.1431
.093	.1218
.106	-.0584
.118	-.0859
.131	-.1761
.167	-.4803
.185	-.5634

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G022)

MACH (4) = 1.188 ALPHA (1) = 4.980 PO = 22.014 Q(PSI) = 9.1090 RN/L = 6.6800 P = 9.2210

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	1.1653
.018	.9408
.020	.6763
.022	.7817
.025	.7842
.028	.7634
.030	.7665
.036	.7706
.039	.7201
.041	.7054
.044	.7519
.049	.7150
.058	.6023
.068	.5055
.077	.4443
.085	.4059
.093	.3857
.106	.2277
.118	.2133
.131	.1299
.167	-.1124
.185	-.1958

MACH (5) = 1.454 ALPHA (1) = 4.970 PO = 21.993 Q(PSI) = 9.4720 RN/L = 6.5100 P = 6.4000

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.4454
.018	.5077
.020	.5432
.022	.5934
.025	.6147
.028	.6477
.030	.6791
.036	.7666
.039	.7633
.041	.7547
.044	.7612
.049	.7502
.058	.6489
.068	.5711
.077	.5122

DATE 30 OCT 7J

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOGL WITH NOSE CAP

(R1G022)

MACH (5) = 1.454 ALPHA (1) = 4.970

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.085	.4618
.093	.4450
.106	.2990
.118	.2669
.131	.1964
.167	-.0153
.185	-.1027

MACH (6) = 1.947 ALPHA (1) = 4.980 PO = 28.019 Q(PSI) = 10.318 RN/L = 7.0700 P = 3.8890

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.3055
.018	.3200
.020	.2840
.022	.2992
.025	.3320
.028	.3793
.030	.3883
.036	.5049
.039	.6180
.041	.6163
.044	.5945
.049	.6101
.058	.5878
.068	.5660
.077	.5426
.085	.4969
.093	.4786
.106	.3377
.118	.3224
.131	.2273
.167	.0491
.185	-.0109

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G022)

MACH (7) = 4.960 ALPHA (1) = 4.980 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2200 P = .14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 22.5000

X/L

.016	.2412
.018	.2337
.020	.2956
.022	.2563
.025	.1671
.028	.1656
.030	.2004
.036	.1913
.039	.2367
.041	.2715
.044	.2881
.049	.3213
.058	.3334
.068	.3455
.077	.3773
.085	.3788
.093	.3682
.106	.2851
.118	.2730
.131	.1868
.167	.1535
.185	.0689

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G023) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 45.000
PHI = .000

MACH (1) = 597 ALPHA (1) = -5.040 PO = 22.010 Q(PS1) = 4.3200 RN/L = 4.9500 P = 17.290

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0112
.018 .7909
.020 .5362
.022 .4057
.025 .5733
.028 .4271
.030 .6923
.036 .7162
.039 .6919
.041 .6555
.044 .5688
.049 .5273
.058 .3914
.068 .3463
.077 .3180
.085 .2782
.093 .2333
.106 .0891
.118 .0627
.131 .0297
.167 -.2750
.185 -.3647

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MACH (2) = .801 ALPHA (1) = -5.040 PO = 22.010 Q(PS1) = 6.4790 RN/L = 5.9200 P = 14.424

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0926
.018 .8755
.020 .6018
.022 .5719
.025 .6435
.028 .5008
.030 .7486
.036 .7851

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16023)

MACH (2) = 801 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.7614
.041	.7331
.044	.6531
.049	.5994
.058	.4636
.068	.4196
.077	.3806
.085	.3354
.093	.2912
.106	.1308
.118	.1011
.131	-.0061
.167	-.3037
.185	-.4271

MACH (3) = .900 ALPHA (1) = -5.040 PO = 22.005 Q(PS1) = 7.3770 RN/L = 6.2400 P = 13.010

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45 0000

X/L

.016	1.1410
.018	.9343
.020	.6465
.022	.6470
.025	.6878
.028	.5485
.030	.7924
.036	.8286
.039	.8076
.041	.7835
.044	.7046
.049	.6491
.058	.5156
.068	.4729
.077	.4253
.085	.3816
.093	.3395
.106	.1710
.118	.1424
.131	.0387
.167	-.2767
.185	-.3932

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G023)

MACH (4) = 1.198 ALPHA (1) = -5.040 PO = 22.005 Q(PSI) = 9.1390 RN/L = 6.6600 P = 9.1010

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.3201
.018	1.1186
.020	.8487
.022	.8490
.025	.8866
.028	.7890
.030	.9765
.036	1.0114
.039	1.0055
.041	.9880
.044	.9150
.049	.8686
.058	.7425
.068	.6984
.077	.6637
.085	.6160
.093	.5774
.106	.4392
.118	.4791
.131	.3168
.167	.0524
.185	-.0477

MACH (5) = 1.455 ALPHA (1) = -5.040 PO = 22.001 Q(PSI) = 9.4760 RN/L = 6.7800 P = 6.3980

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.6445
.018	1.2276
.020	.7870
.022	.6360
.025	.7858
.028	.7980
.030	.9359
.036	1.0087
.039	1.0641
.041	1.0400
.044	.9552
.049	.8886
.058	.7425
.068	.7490
.077	.7025

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16023)

MACH (5) = 1.455 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.085	.6604
.093	.6400
.106	.4800
.118	.4698
.131	.3835
.167	.1466
.185	.0360

MACH (6) = 1.953 ALPHA (1) = -5.040 PO = 28.015 Q(PS1) = 10.285 RN/L * 7.0700 P = 3.8540

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.6240
.018	1.5617
.020	.9068
.022	.3363
.025	.8343
.028	.3201
.030	.4032
.036	.5398
.039	.7478
.041	.8166
.044	.8501
.049	.8339
.058	.7568
.068	.7459
.077	.7012
.085	.6816
.093	.6613
.106	.5002
.118	.4811
.131	.4088
.167	.1929
.185	.1120

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G023)

MACH (7) = 4.960 ALPHA (1) = -5.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.3400 P = .14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.2004
.018	3.4633
.020	.7250
.022	.2805
.025	.2624
.028	.2064
.030	.3350
.036	.3637
.039	.4226
.041	.4801
.044	.5557
.049	.5572
.058	.4756
.068	.5693
.077	.6676
.085	.6252
.093	.6086
.106	.4877
.118	.4272
.131	.3516
.167	.2080
.185	.1611

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 116

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G024) (29 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 45.000
 PHI = .000

MACH (1) = .597 ALPHA (1) = -4.040 PO = 22 010 Q(PSI) = 4.3200 RN/L = 4.9400 P = 17.290

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L
 .016 1.0036
 .018 .7728
 .020 .5112
 .022 .3707
 .025 .5558
 .028 .4647
 .030 .6779
 .036 .7191
 .039 .6856
 .041 .6574
 .044 .5845
 .049 .5336
 .058 .3872
 .068 .3459
 .077 .3001
 .085 .2503
 .093 .2132
 .106 .0676
 .118 .0400
 .131 -.0504
 .167 -.2918
 .185 -.3769

MACH (2) = .902 ALPHA (1) = -4.040 PO = 22.014 Q(PSI) = 5.4850 RN/L = 5.9200 P = 14.419

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L
 .016 1.0917
 .018 .8630
 .020 .5820
 .022 .5942
 .025 .6235
 .028 .5433
 .030 .7427
 .036 .7869

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16024)

MACH (2) = .802 ALPHA (1) = -4.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.7582
.041	.7409
.044	.6629
.049	.6000
.058	.4542
.068	.4178
.077	.3694
.085	.3124
.093	.2693
.106	.1170
.118	.0781
.131	-.0258
.167	-.3252
.185	-.4360

MACH (3) = 901 ALPHA (1) = -4.040 PO = 22.001 Q(PSI) = 7.3880 RN/L = 6.2500 P = 12.988

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.423
.018	.9184
.020	.6244
.022	.6508
.025	.6715
.028	.5941
.030	.7845
.036	.8280
.039	.8034
.041	.7913
.044	.7124
.049	.6574
.058	.5172
.068	.4664
.077	.4140
.085	.3606
.093	.3157
.106	.1567
.118	.1216
.131	.0179
.167	-.2933
.185	-.4123

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G024)

MACH (4) = 1.198 ALPHA (1) = -4.060 PO = 22.010 Q(PSI) = 9.1420 RN/L = 6.6600 P = 9.0990

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.3186
.018	1.1075
.020	.8267
.022	.8496
.025	.8744
.028	.8191
.030	.9638
.036	1.0221
.039	1.0053
.041	.9913
.044	.9252
.049	.8746
.053	.7426
.068	.6979
.077	.6469
.085	.5950
.093	.5607
.106	.4205
.118	.3886
.131	.3017
.157	.0389
.185	-.0579

MACH (5) = 1.456 ALPHA (1) = -4.060 PO = 22.005 Q(PSI) = 9.4770 RN/L = 6.7900 P = 6.3850

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.5629
.018	1.1412
.020	.7845
.022	.6336
.025	.7939
.028	.7996
.030	.9127
.036	1.0180
.039	1.0796
.041	1.0588
.044	.9670
.049	.8927
.058	.7454
.068	.7425
.077	.6878

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 119

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16024)

MACH (5) = 1.456 ALPHA (1) = -4.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.085	.6421
.093	.6241
.106	.4654
.118	.4527
.131	.3715
.167	.1356
.185	.0262

MACH (6) = 1.951 ALPHA (1) = -4.060 PO = 28.024 Q(PSI) = 10.299 RN/L = 7.0700 P = 3.8670

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.5038
.018	1.3409
.020	.9283
.022	.3049
.025	.7774
.028	.3343
.030	.4055
.036	.5630
.039	.7656
.041	.8211
.044	.8495
.049	.8250
.058	.7411
.068	.7327
.077	.6867
.085	.6702
.093	.6486
.106	.4872
.118	.4723
.131	.3947
.167	.1798
.185	.0995

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 120

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G024)

MACH (7) = 4.960 ALPHA (1) = -4.080 PO = 75.011 Q(PS1) = 2.5580 RN/L = 4.2300 P = .14800

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	2276
.018	1.8438
.020	1.1658
.022	3183
.025	.2547
.028	.2081
.030	.3244
.036	.2396
.039	.3927
.041	.4302
.044	.5313
.049	.5455
.058	.4982
.068	.5404
.077	.6408
.085	.6041
.093	.5842
.106	.4663
.118	.4302
.131	.3409
.167	2276
.185	.1429

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G025) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 45.000
PHI = .000

MACH (1) = .597 ALPHA (1) = -3.040 PO = 22.010 Q(PSI) = 4.3180 RN/L = 4.9400 P = 17.292

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0117
.018 .7795
.020 .4838
.022 .5327
.025 .5424
.028 .4829
.030 .6714
.036 .7334
.039 .6779
.041 .6633
.044 .5908
.049 .5303
.058 .3920
.068 .3388
.077 .2780
.085 .2308
.093 .1899
.106 .0472
.118 .0212
.131 -.0701
.167 -.3056
.185 -.3858

MACH (2) = 800 ALPHA (1) = -3.060 PO = 22.014 Q(PSI) = 6.4730 RN/L = 5.9200 P = 14.436

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0943
.018 .8536
.020 .5532
.022 .5926
.025 .6110
.028 .5633
.030 .7231
.036 .8008

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 122

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16025)

MACH (2) = .800 ALPHA (1) = -3.060

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.7589
.041	.7399
.044	.6625
.049	.6104
.058	.4625
.068	.4057
.077	.3450
.085	.2886
.093	.2411
.106	.0910
.118	.0549
.131	-.0491
.167	-.3443
.185	-.4537

MACH (3) = .900 ALPHA (1) = -3.040 PO = 22.005 Q(PSI) = 7.3800 RN/L = 6.2500 P = 13.005

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.1462
.018	.9094
.020	.6022
.022	.6476
.025	.6627
.028	.6153
.030	.7656
.036	.8505
.039	.8108
.041	.7940
.044	.7176
.049	.6625
.058	.5173
.068	.4622
.077	.3937
.085	.3383
.093	.2984
.106	.1358
.118	.0994
.131	.0006
.167	-.3105
.185	-.4248

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 123

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G025)

MACH (4) = 1.199 ALPHA (1) = -3.050 PO = 22.005 Q(PSI) = 9.1420 RN/L = 6.6600 P = 9.0910

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.3319
.018 1.0964
.020 .8024
.022 .8407
.025 .8653
.028 .8287
.030 .9486
.036 1.0378
.039 1.0090
.041 .9960
.044 .9253
.049 .8714
.058 .7450
.068 .6876
.077 .6268
.085 .5775
.093 .5422
.106 .3999
.118 .3718
.131 .2833
.167 .0274
.185 -.0710

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MACH (5) = 1.457 ALPHA (1) = -3.060 PO = 21.993 Q(PSI) = 9.4700 RN/L = 6.7800 P = 6.3700

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 .4979
.018 1.0250
.020 .7715
.022 .6397
.025 .8006
.028 .8111
.030 .8940
.036 1.0131
.039 1.0866
.041 1.0705
.044 .9759
.049 .8936
.058 .7462
.068 .7319
.077 .6699

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16025)

MACH (5) = 1.457 ALPHA (1) = -3.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.085	.6228
.093	.6077
.106	.4486
.118	.4309
.131	.3551
.167	.1217
.185	.0167

MACH (6) = 1.949 ALPHA (1) = -3.060 PO = 28.019 Q(PSI) = 10.307 RN/L = 7.0700 P = 3.8770

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.4380
.018	1.1330
.020	.9100
.022	.2655
.025	.7276
.028	.3526
.030	.4204
.036	.5692
.039	.7626
.041	.8174
.044	.8429
.049	.8095
.056	.7356
.068	.7148
.077	.6741
.085	.6617
.093	.6349
.106	.4670
.118	.4673
.131	.3751
.167	.1689
.185	.0841

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G025)

MACH (7) = 4.960 ALPHA (1) = -3.060 PO = 75.019 Q(PSI) = 2.5560 RN/L = 4.1700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.2488
.018	.7114
.020	1.2995
.022	.3274
.025	.2639
.028	.2427
.030	.3138
.036	.2246
.039	.3697
.041	.3516
.044	.4499
.049	.4695
.058	.4861
.068	.5285
.077	.6101
.085	.5814
.093	.5572
.106	.4468
.118	.4151
.131	.3198
.167	.2201
.185	.1293

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16026) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5896 SO. IN. XMRP = 0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = 0091

PARAMETRIC DATA

BETA = .000 THETA = 45.000
 PHI = .000

MACH (1) = .596 ALPHA (1) = -2.040 PO = 22.001 Q(PSI) = 4.3050 RN/L = 4.9300 P = 17.300

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0239
 .018 .7706
 .020 .4652
 .022 .5230
 .025 .5314
 .028 .4966
 .030 .6628
 .036 .7526
 .039 .6859
 .041 .6700
 .044 .5874
 .049 .5316
 .058 .3896
 .068 .3265
 .077 .2607
 .085 .2104
 .093 .1704
 .106 .0302
 .118 .0043
 .131 -.0895
 .167 -.3191
 .185 -.3973

MACH (2) = .803 ALPHA (1) = -2.040 PO = 22.018 Q(PSI) = 6.4970 RN/L = 5.9300 P = 14.406

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.1033
 .018 .8420
 .020 .5302
 .022 .5825
 .025 .6026
 .028 .5707
 .030 .7044
 .036 .8273

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 127

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G026)

MACH (2) = .803 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.7642
.041	.7438
.044	.6638
.049	.6070
.058	.4594
.068	.3933
.077	.3236
.085	.2674
.093	.2262
.106	.0694
.118	.0355
.131	-.0650
.167	-.3609
.185	-.4598

MACH (3) = .900 ALPHA (1) = -2.040 PO = 22.010 Q(P51) = 7.3830 RN/L = 6.2600 P = 13.005

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.015	1.1515
.018	.9008
.020	.5806
.022	.6358
.025	.6528
.028	.6204
.030	.7436
.036	.8762
.039	.8170
.041	.7914
.044	.7161
.049	.6586
.058	.5060
.058	.4457
.077	.3751
.085	.3110
.093	.2752
.106	.1177
.118	.0745
.131	-.0208
.167	-.3470
.185	-.4429

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G026)

MACH (4) = 1.199 ALPHA (1) = -2.040 P0 = 22.001 Q(PSI) = 9.1430 RN/L = 6.6600 P = 9.0790

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.3440
.018	1.0930
.020	.7853
.022	.8312
.025	.8599
.028	.8331
.030	.9371
.036	1.0625
.039	1.0142
.041	.9942
.044	.9255
.049	.8691
.058	.7362
.068	.6750
.077	.6059
.085	.5561
.093	.5257
.106	.3808
.118	.3518
.131	.2702
.167	.0134
.185	-.0809

MACH (5) = 1.458 ALPHA (1) = -2.060 P0 = 22.001 Q(PSI) = 9.4730 RN/L = 6.7900 P = 6.3630

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.4411
.018	.8931
.020	.7462
.022	.6475
.025	.8083
.028	.8278
.030	.8855
.036	1.0010
.039	1.0814
.041	1.0742
.044	.9818
.049	.8948
.058	.7499
.068	.7180
.077	.6503

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10025)

MACH (5) = 1.458 ALPHA (1) = -2.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.085	.6045
.093	.5911
.106	.4323
.118	.4113
.131	.3398
.167	.1066
.185	.0073

MACH (6) = 1.947 ALPHA (1) = -2.060 PO = 28.015 Q(PSI) = 10.315 RN/L = 7.0700 P = 3.8870

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.3812
.018	.9080
.020	.8526
.022	.2298
.025	.6829
.028	.3758
.030	.4322
.036	.5583
.039	.7646
.041	.8086
.044	.8303
.049	.8066
.058	.7350
.068	.6919
.077	.6683
.085	.6480
.093	.6191
.106	.4529
.118	.4578
.131	.3579
.167	.1580
.185	.0717

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G026)

MACH (7) = 4.960 ALPHA (1) = -2.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.3319
.018	.4075
.020	.7175
.022	.3380
.025	.3759
.028	.3773
.030	.3546
.036	.5784
.039	.6403
.041	.7129
.044	1.1710
.049	.8762
.058	.7069
.068	.8913
.077	.7507
.085	.6373
.093	.6812
.106	.5648
.118	.4302
.131	.3879
.167	.2382
.185	.1792

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 131

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G027) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = 0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 45.000
PHI = .000

MACH (1) = .596 ALPHA (1) = -1.040 PO = 22.010 Q(PSI) = 4.3080 RN/L = 4.9300 P = 17.305

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0112
.018 .7577
.020 .4375
.022 .4997
.025 .5147
.028 .4957
.030 .6491
.036 .7699
.039 .6918
.041 .6826
.044 .5854
.049 .5217
.058 .3755
.068 .3060
.077 .2335
.085 .1895
.093 .1484
.106 .0052
.118 -.0154
.131 -.1059
.167 -.3377
.185 -.4077

MACH (2) = .803 ALPHA (1) = -1.040 PO = 22.014 Q(PSI) = 6.5040 RN/L = 5.9400 P = 14.391

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.1006
.018 .8316
.020 .5155
.022 .5609
.025 .5954
.028 .5696
.030 .6946
.036 .8331

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 132

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G027)

MACH (2) = .803 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.7707
.041	.7474
.044	.6628
.049	.5993
.058	.4435
.068	.3744
.077	.2995
.085	.2459
.093	.2040
.106	.0473
.118	.0138
.131	-.0860
.167	-.3796
.185	-.4757

MACH (3) = 900 ALPHA (1) = -1.040 PO * 22.014 Q(PSI) = 7.3770 RN/L * 6.2600 P * 13.020

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.1512
.018	.8886
.020	.5664
.022	.5158
.025	.6375
.028	.6104
.030	.7326
.036	.8831
.039	.8250
.041	.8045
.044	.7155
.049	.6503
.058	.4970
.068	.4265
.077	.3497
.085	.2961
.093	.2552
.106	.0947
.118	.0610
.131	-.0390
.167	-.3570
.185	-.4575

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 133

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16C.7)

MACH (4) = 1.199 ALPHA (1) = -1.040 PO = 22.014 Q(PSI) = 9.1460 RN/L = 6.6800 P = 9.0910

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.3197
.018	1.0862
.020	.7661
.022	.8064
.025	.8479
.028	.8350
.030	.9426
.036	1.0586
.039	1.0173
.041	1.0039
.044	.9211
.049	.8617
.058	.7236
.068	.6550
.077	.5860
.085	.5364
.093	.5039
.106	.3631
.118	.3334
.131	.2513
.167	-.0025
.185	-.0964

MACH (5) = 1.458 ALPHA (1) = -1.060 PO = 22.005 Q(PSI) = 9.4750 RN/L = 6.8000 P = 6.3650

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.4123
.018	.7929
.020	.7095
.022	.6604
.025	.8091
.028	.8376
.030	.8793
.036	.9899
.039	1.0613
.041	1.0622
.044	.9809
.049	.8952
.058	.7548
.068	.7017
.077	.6294

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16027)

MACH (5) = 1.458 ALPHA (1) = -1.060

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.085	.5854
.093	.5711
.106	.4127
.118	.3935
.131	.3217
.167	.0930
.185	-.0065

MACH (6) = 1.947 ALPHA (1) = -1.060 PO = 28.019 Q(PSI) = 10.316 RN/L = 7.0700 P = 3.8870

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.3330
.018	.7642
.020	.7844
.022	.2116
.025	.6420
.028	.3900
.030	.4354
.036	.5523
.039	.7537
.041	.8006
.044	.8227
.049	.7893
.058	.7365
.068	.6795
.077	.6600
.085	.6273
.093	.5985
.106	.4357
.118	.4462
.131	.3390
.167	.1448
.185	.0593

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16027)

MACH (7) = 4.960 ALPHA (1) = -1.060 PO = 75.003 Q(P51) = 2.5580 RN/L = 4.3400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.2564
.018	.2775
.020	1.1514
.022	.3002
.025	.3079
.028	.3047
.030	.3200
.036	.2958
.039	.3712
.041	.3305
.044	.3805
.049	.5486
.058	.4591
.068	.5438
.077	.5663
.085	.5256
.093	.4984
.106	.4045
.118	.4349
.131	.2912
.167	.1778
.185	.1355

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16028) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 45.000
 PHI = .000

MACH (1) = .598 ALPHA (1) = - .040 PO = 22.010 Q(PS1) = 4.3220 RN/L = 4.9400 P = 17.287

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 .9843
 .018 .7394
 .020 .4237
 .022 .4743
 .025 .5100
 .028 .5162
 .030 .6212
 .036 .7268
 .039 .6914
 .041 .6749
 .044 .5831
 .049 .5171
 .058 .3627
 .068 .2869
 .077 .2127
 .085 .1660
 .093 .1254
 .106 -.0127
 .118 -.0360
 .131 -.1252
 .167 -.3518
 .185 -.4151

MACH (2) = .803 ALPHA (1) = -.040 PO = 22.014 Q(PS1) = 6.4990 RN/L = 5.9500 P = 14.399

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0789
 .018 .8202
 .020 .4852
 .022 .5290
 .025 .5817
 .028 .5849
 .030 .6931
 .036 .7986

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 137

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G028)

MACH (2) = .803 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.7695
.041	.7551
.044	.6598
.049	.5903
.058	.4332
.068	.3530
.077	.2786
.085	.2245
.093	.1814
.106	.0269
.118	-.0050
.131	-.1063
.167	-.3961
.185	-.4900

MACH (3) = .900 ALPHA (1) = -.040 PO = 22.001 Q(PSI) = 7.3790 RN/L * 6.2700 P * 13.003

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.1316
.018	.8802
.020	.5393
.022	.5676
.025	.6272
.028	.6261
.030	.7340
.036	.8386
.039	.8176
.041	.8045
.044	.7094
.049	.6429
.058	.4508
.068	.4026
.077	.3280
.085	.2795
.093	.2286
.106	.0743
.118	.0475
.131	-.0633
.167	-.3615
.185	-.4771

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 138

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16028)

MACH (4) = 1.198 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 9.1410 RN/L = 6.6900 P = 9.1010

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.2919
.018	1.0752
.020	.7408
.022	.7607
.025	.8350
.028	.8357
.030	.9298
.036	1.0190
.039	1.0051
.041	1.0008
.044	.9183
.049	.8551
.058	.7174
.068	.6359
.077	.5642
.085	.5169
.093	.4841
.106	.3418
.118	.3159
.131	.2338
.167	-.0135
.185	-.1099

MACH (5) = 1.458 ALPHA (1) = -.040 PO = 22.018 Q(PSI) = 9.4810 RN/L = 6.8100 P = 6.3730

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.3961
.018	.6830
.020	.6764
.022	.6781
.025	.7939
.028	.8363
.030	.8649
.036	.9698
.039	1.0326
.041	1.0359
.044	.9771
.049	.8963
.058	.7597
.068	.6895
.077	.6132

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 139

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G028)

MACH (5) = 1.458 ALPHA (1) = -.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.085	5651
.093	5500
.106	.3945
.118	.3713
.131	.3023
.167	0779
.185	- 0203

MACH (6) = 1.953 ALPHA (1) = -.040 PO = 28.024 Q(PSI) = 10.285 RN/L = 7.0600 P = 3.8520

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	2957
.018	.6073
.020	.7004
.022	2011
.025	.6135
.028	.3822
.030	.4387
.036	5321
.039	.7106
.041	.8036
.044	8009
.049	7558
.058	7306
.068	6810
.077	6363
.085	6064
.093	.5717
.106	.4116
.118	.4316
.131	.3233
.167	.1311
.185	.0526

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16028)

MACH (7) = 4.960 ALPHA (1) = -.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45 0000

X/L

.016	.2820
.018	.2562
.020	.7673
.022	3726
.025	.3304
.028	.3289
.030	.3501
.036	.3198
.039	.3728
.041	3743
.044	3607
.049	5799
.058	5088
.068	5572
.077	5391
.085	5118
.093	4771
.106	.3773
.118	3697
.131	2730
.167	.2049
.185	.1067

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G029) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330 2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 45.000
PHI = .000

MACH (1) = .597 ALPHA (1) = .980 PO = 22.005 Q(PSI) = 4.3080 RN/L = 4.9300 P = 17.300

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 .9621
.018 .7138
.020 .3824
.022 .4371
.025 .4793
.028 .5168
.030 .6353
.036 .7149
.039 .6852
.041 .6793
.044 .5827
.049 .5105
.058 .3597
.068 .2760
.077 .1951
.085 .1523
.093 .1132
.106 -.0261
.118 -.0505
.131 -.1359
.167 -.3558
.185 -.4174

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MACH (2) = .802 ALPHA (1) = .960 PO = 22.014 Q(PSI) = 6.4880 RN/L = 5.9300 P = 14.414

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45 0000

X/L

.016 1 0493
.018 .7930
.020 .4474
.022 .4786
.025 .5475
.028 .5617
.030 .6832
.036 .7599

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G029)

MACH (2) = .802 ALPHA (1) = .960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.7564
.041	.7482
.044	.6555
.049	.5832
.058	.4261
.068	.3339
.077	.2521
.085	.2007
.093	.1579
.105	.0045
.118	-.0276
.131	-.1243
.167	-.4128
.185	-.4978

MACH (3) = .905 ALPHA (1) = .960 PO = 22.014 Q(PS1) = 7.4240 RN/L = 6.2500 P = 12.940

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.1019
.018	.9570
.020	.5089
.022	.5379
.025	.6039
.028	.6031
.030	.7314
.036	.8020
.039	.8129
.041	.8000
.044	.7105
.049	.6406
.058	.4820
.068	.3895
.077	.3137
.085	.2591
.093	.2128
.106	.0612
.118	.0242
.131	-.0788
.167	-.3670
.185	-.4824

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16029)

MACH (4) = 1.200 ALPHA (1) = .980 PO = 22.005 Q(PSI) = 9.1470 RN/L = 6.6600 P = 9.0740

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.2616
.018	1.0528
.020	.7132
.022	.7541
.025	.8305
.028	.8265
.030	.9187
.036	.9989
.039	.9978
.041	.9935
.044	.9143
.049	.8523
.058	.7111
.068	.6208
.077	.5487
.085	.5005
.093	.4664
.106	.3284
.118	.2967
.131	.2177
.167	-.0246
.185	-.1218

MACH (5) = 1.457 ALPHA (1) = .960 PO = 22.001 Q(PSI) = 9.4740 RN/L = 6.5900 P = 6.3780

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.3992
.018	.6028
.020	.6543
.022	.6993
.025	.7850
.028	.8237
.030	.8535
.036	.9602
.039	1.0095
.041	1.0209
.044	.9712
.049	.8972
.058	.7605
.068	.6763
.077	.5984

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G029)

MACH (5) = 1.457 ALPHA (1) = .960

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.085	.5458
.093	.5285
.106	.3776
.118	.3515
.131	.2830
.167	.0633
.185	-.0330

MACH (6) = 1.949 ALPHA (1) = .960 PO = 28.019 Q(PS1) = 10.309 RN/L = 7.0700 P = 3.8790

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.2868
.018	.4931
.020	.6058
.022	.2041
.025	.5802
.028	.3937
.030	.4394
.036	.5381
.039	.7214
.041	.8069
.044	.8055
.049	.7574
.058	.7280
.068	.6667
.077	.6155
.085	.5850
.093	.5490
.107	.3911
.113	.4069
.131	.3027
.167	.1146
.185	.0402

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G029)

MACH (7) = 4.960 ALPHA (1) = .960 PO = 75 019 Q(PSI) = 2.5580 RN/L = 4.1800 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	2820
.018	2548
.020	.4756
.022	3667
.025	.3183
.028	3168
.030	3395
.036	.3047
.039	3607
.041	3788
.044	.3637
.049	.6116
.058	5149
.068	.5557
.077	.5239
.085	.4907
.093	.4544
.106	3591
.118	3501
.131	.2609
.167	.1959
.185	0991

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG030) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 45 000
PHI = .000

MACH (1) = .596 ALPHA (1) = 1.960 PO = 22.014 Q(PSI) = 4.3070 RN/L = 4.9300 P = 17.310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45 0000

X/L

.016 .9524
.018 .7012
.020 .3848
.022 .1590
.025 .4872
.028 .1559
.030 .3426
.036 .6091
.039 .6502
.041 .6585
.044 .5840
.049 .5098
.058 .3530
.068 .2587
.077 .1743
.085 .1266
.093 .0894
.106 -.0495
.118 -.0764
.131 -.1569
.167 -.3747
.185 -.4275

MACH (2) = .800 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 6.4700 RN/L = 5.9100 P = 14.431

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0433
.018 .7766
.020 .4502
.022 .5285
.025 .5598
.028 .5328
.030 .6076
.036 .6871

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG030)

MACH (2) = .800 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.7206
.041	.7325
.044	.6530
.049	.5794
.058	.4265
.068	.3184
.077	.2337
.085	.1827
.093	.1379
.106	-.0138
.118	-.0467
.131	-.1435
.167	-.4262
.185	-.5093

MACH (3) = .903 ALPHA (1) = 1.960 PO = 22.018 Q(PSI) = 7.4050 RN/L = 6.2400 P = 12.978

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.1001
.018	.8340
.020	.4976
.022	.5640
.025	.6200
.028	.5847
.030	.6521
.036	.7308
.039	.7626
.041	.7822
.044	.7105
.049	.6298
.058	.4793
.068	.3765
.077	.2830
.085	.2381
.093	.1939
.106	.0302
.118	.0010
.131	-.0948
.167	-.3816
.185	-.4907

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G030)

MACH (4) = 1.199 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 9.1420 RN/L = 6.6500 P = 9.0910

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45 0000

X/L

.016	1 2802
.018	1 0323
.020	.7171
.022	.7927
.025	.8231
.028	.8037
.030	.8464
.036	.9158
.039	.9572
.041	.9768
.044	.9175
.049	.8515
.058	.7055
.068	.6076
.077	.5345
.085	.4820
.093	.4475
.106	.3131
.118	.2759
.131	.2011
.167	-.0414
.185	-.1334

MACH (5) = 1.452 ALPHA (1) = 1.960 PO = 22.001 Q(PSI) = 9.4770 RN/L = 6.5800 P = 6.4180

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.3911
.018	.5694
.020	.6372
.022	.6789
.025	.7637
.028	.8049
.030	.8290
.036	.9593
.039	.9983
.041	1.0098
.044	.9613
.049	.8881
.058	.7186
.068	.6547
.077	.5772

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G030)

MACH (5) = 1.452 ALPHA (1) = 1.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.085	.5270
.093	.5069
.106	.3625
.118	.3340
.131	.2562
.167	.0446
.185	-.0500

MACH (6) = 1.954 ALPHA (1) = 1.980 PO = 28.015 Q(PST) = 10.278 RN/L = 7.0400 P = 3.8470

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.2665
.018	.4075
.020	.5366
.022	.2125
.025	.5523
.028	.3899
.030	.4115
.036	.5346
.039	.7133
.041	.7869
.044	.8022
.049	.7510
.058	.6845
.068	.6502
.077	.5892
.085	.5466
.093	.5294
.106	.3741
.118	.3757
.131	.2844
.167	.0940
.185	.0308

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G030)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.2699
.018	.2488
.020	.6691
.022	.3697
.025	.2987
.028	.3334
.030	.2987
.036	.3985
.039	.5678
.041	.3743
.044	.7235
.049	.8581
.058	.5073
.068	.6600
.077	.6706
.085	.4650
.093	.4846
.106	.4786
.118	.3334
.131	.2639
.167	.1807
.185	.0961

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG031) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 45.000
PHI = .000

MACH (1) = .596 ALPHA (1) = 2 980 PO = 22 001 Q(PSI) = 4.3030 RN/L = 4 9200 P = 17.302

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 .9425
.018 6758
.020 3920
.022 4943
.025 5025
.028 4838
.030 4982
.036 5429
.039 5944
.041 6214
.044 5716
.049 5009
.058 3443
.068 2385
.077 1555
.085 1078
.093 0661
.106 -.0693
.118 -.0945
.131 -.1762
.167 -.3877
.185 -.4366

MACH (2) = 800 ALPHA (1) = 2 980 PO = 22.005 Q(PSI) = 6.4650 RN/L = 5.9100 P = 14.439

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0279
.018 .7503
.020 .4564
.022 5587
.025 .5683
.028 5490
.030 .5640
.036 .6114

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10031)

MACH (2) = .800 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.6620
.041	.6892
.044	.6406
.049	.5712
.058	.4117
.068	.2999
.077	.2150
.085	.1587
.093	.1111
.106	-.0359
.118	-.0720
.131	-.1662
.167	-.4490
.185	-.5212

MACH (3) = 899 ALPHA (1) = 2.980 PO = 22.014 Q(PSI) = 7.3720 RN/L = 6.2200 P = 13.028

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.0791
.018	.8065
.020	.5099
.022	.6044
.025	.6159
.028	.6066
.030	.6119
.036	.6602
.039	.7168
.041	.7395
.044	.6917
.049	.6275
.058	.4617
.068	.3490
.077	.2733
.085	.2092
.093	.1599
.106	.0188
.118	-.0290
.131	-.1270
.167	-.4107
.185	-.5219

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G031)

MACH (4) = 1.196 ALPHA (1) = 2.980 PO = 22.014 Q(PS1) = 9.1380 RN/L = 6.6600 P = 9.1210

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.2621
.018 1.0045
.020 .7188
.022 .8125
.025 .8276
.028 .8132
.030 .8211
.036 .8695
.039 .9144
.041 .9408
.044 .9047
.049 .8391
.058 .6930
.068 .5913
.077 .5155
.085 .4634
.093 .4270
.106 .2931
.118 .2575
.131 .1834
.167 -.0549
.185 -.1468

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MACH (5) = 1.455 ALPHA (1) = 2.980 PO = 21.997 Q(PS1) = 9.4740 RN/L = 6.5800 P = 6.3980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 .4062
.018 .5519
.020 .6023
.022 .6495
.025 .7192
.028 .7629
.030 .7878
.036 .9559
.039 .9897
.041 .9988
.044 .9445
.049 .8724
.058 .7290
.068 .6355
.077 .5562

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G031)

MACH (5) = 1.455 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.085	.5070
.093	.4878
.106	.3404
.118	.3196
.131	.2462
.167	.0331
.185	-.0586

MACH (6) = 1.955 ALPHA (1) = 2.980 PO = 28.003 Q(PSI) = 10.269 RN/L = 7.0400 P = 3.8390

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.2557
.018	.3641
.020	.4774
.022	.2320
.025	.5321
.028	.3792
.030	.3940
.036	.5245
.039	.7040
.041	.7787
.044	.7963
.049	.7409
.058	.6597
.068	.6278
.077	.5632
.085	.5150
.093	.5046
.106	.3548
.118	.3499
.131	.2679
.167	.0779
.185	.0236

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 155

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G031)

MACH (7) = 4.960 ALPHA (1) = 2.980 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.3300 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.2473
.018	.2473
.020	.3123
.022	.2367
.025	.2518
.028	.2412
.030	.2563
.036	.2352
.039	.3229
.041	.3591
.044	.4619
.049	.6781
.058	.5149
.068	.5330
.077	.4816
.085	.4332
.093	.4060
.106	.3198
.118	.3954
.131	.2306
.167	.1460
.185	.1142

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 156

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G032) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 45.000
 PHI = .000

MACH (1) = .597 ALPHA (1) = 3 960 PO = 22.010 Q(PSI) = 4.3100 RN/L = 4.9300 P = 17.302

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45 0000

X/L

.016 .9222
 .018 .6519
 .020 .3782
 .022 .4773
 .025 .4969
 .028 .4850
 .030 .4839
 .036 .5257
 .039 .5845
 .041 .5998
 .044 .5472
 .049 .4805
 .058 .3186
 .068 .2134
 .077 .1307
 .085 .0833
 .093 .0438
 .106 -.0916
 .118 -.1187
 .131 -.1993
 .167 -.4088
 .185 -.4532

MACH (2) = .799 ALPHA (1) = 3 960 PO = 22.005 Q(PSI) = 6.4550 RN/L = 5.9100 P = 14.454

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016 1.0047
 .018 .7239
 .020 .4424
 .022 .5432
 .025 .5700
 .028 .5527
 .030 .5537
 .036 .5958

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 157

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G032)

MACH (2) = .799 ALPHA (1) = 3.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.6498
.041	.6715
.044	.6234
.049	.5509
.058	.3892
.068	.2784
.077	.1888
.085	.1368
.093	.0900
.106	-.0623
.118	-.0916
.131	-.1859
.167	-.4660
.185	-.5333

MACH (3) = .897 ALPHA (1) = 3.960 PO = 22.010 Q(PSI) = 7.3550 RN/L = 6.2200 P = 13.053

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.0579
.018	.7811
.020	.4931
.022	.5978
.025	.6149
.028	.6030
.030	.6039
.036	.6434
.039	.7024
.041	.7259
.044	.6756
.049	.6041
.058	.4426
.068	.3260
.077	.2443
.085	.1902
.093	.1395
.106	-.0106
.118	-.0443
.131	-.1461
.167	-.4198
.185	-.5381

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 158

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G032)

MACH (4) = 1.192 ALPHA (1) = 3.960 PO = 22.010 Q(PSI) = 9.1230 RN/L = 6.6600 P = 9.1660

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.000Q

X/L

.016	1.2404
.018	.9791
.020	.7088
.022	.8032
.025	.8228
.028	.8097
.030	.8082
.036	.8576
.039	.9093
.041	.9273
.044	.8877
.049	.8224
.058	.6720
.068	.5688
.077	.4961
.085	.4447
.093	.4081
.106	.2736
.118	.2386
.131	.1672
.167	-.0722
.185	-.1604

MACH (5) = 1.454 ALPHA (1) = 3.960 PO = 21.997 Q(PSI) = 9.4740 RN/L = 6.5800 P = 6.4000

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.4021
.018	.5286
.020	.5794
.022	.6257
.025	.6886
.028	.7306
.030	.7572
.036	.9608
.039	.9856
.041	.9902
.044	.9335
.049	.8552
.058	.7086
.068	.6135
.077	.5370

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 159

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G032)

MACH (5) = 1.454 ALPHA (1) = 3.960

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THEIA 45.0000

X/L

.085	.4882
.093	.4703
.106	.3229
.118	.3046
.131	.2278
.167	.0168
.185	-.0704

MACH (6) = 1.950 ALPHA (1) = 3.960 PO = 28.024 Q(PSI) = 10.303 RN/L = 7.0600 P = 3.8720

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THEIA 45.0000

X/L

.016	.2546
.018	.3461
.020	.4365
.022	.2508
.025	.5111
.028	.3813
.030	.3926
.036	.5232
.039	.7033
.041	.7871
.044	.7966
.049	.7484
.058	.6633
.068	.6043
.077	.5485
.085	.5077
.093	.4830
.106	.3422
.118	.3547
.131	.2505
.167	.0716
.185	.0101

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 160

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG032)

MACH (7) = 4.960 ALPHA (1) = 3.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.015	.2730
.018	.2382
.020	.3062
.022	.2653
.025	.2140
.028	.2080
.030	.2684
.036	.2170
.039	.3158
.041	.4226
.044	.5239
.049	.6948
.058	.5557
.068	.5058
.077	.4499
.085	.4257
.093	.3833
.106	.3017
.118	.3163
.131	.2140
.167	.1944
.185	.0885

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG033) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 45.000
PHI = .000

MACH (1) = .595 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 4.2980 RN/L = 4.9200 P = 17.312

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L
.016 .9002
.018 .6233
.020 .3632
.022 .4525
.025 .4889
.028 .4739
.030 .4622
.036 .5490
.039 .5953
.041 .6058
.044 .5355
.049 .4622
.058 .2961
.068 .1910
.077 .1114
.085 .0595
.093 .0205
.106 -.1116
.118 -.1391
.131 -.2163
.167 -.4253
.185 -.4604

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MACH (2) = .796 ALPHA (1) = 4.980 PO = 22.010 Q(PSI) = 6.4310 RN/L = 5.9100 P = 14.494

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L
.016 .9770
.018 .6973
.020 .4259
.022 .5190
.025 .5545
.028 .5376
.030 .5298
.036 .5978

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G033)

MACH (2) = .796 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.039	.6577
.041	.6671
.044	.6099
.049	.5316
.058	.3619
.068	.2511
.077	.1623
.085	.1097
.093	.0651
.106	-.0863
.118	-.1165
.131	-.2080
.167	-.4849
.185	-.5481

MACH (3) = .904 ALPHA (1) = 4.980 PO = 22.010 Q(PS1) = 7.4080 RN/L = 6.2500 P = 12.963

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.0315
.018	.7503
.020	.4841
.022	.5686
.025	.6094
.028	.5919
.030	.5759
.036	.6515
.039	.7191
.041	.7227
.044	.6703
.049	.5956
.058	.4175
.068	.3116
.077	.2277
.085	.1641
.093	.1273
.106	-.0255
.118	-.0714
.131	-.1553
.167	-.4423
.185	-.5337

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G033)

MACH (4) = 1.188 ALPHA (1) = 4.980 PO = 22 010 Q(PSI) = 9.1090 RN/L = 6.6700 P = 9.2140

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	1.2115
.018	.9528
.020	.6944
.022	.7845
.025	.8086
.028	.7925
.030	.7792
.036	.8604
.039	.9131
.041	.9257
.044	.8774
.049	.8044
.058	.6480
.068	.5475
.077	.4722
.085	.4208
.093	.3879
.106	.2522
.118	.2170
.131	.1480
.167	-.0912
.185	-.1762

MACH (5) = 1.458 ALPHA (1) = 4.960 PO = 22.001 Q(PSI) = 9.4730 RN/L = 6.5800 P = 6.3630

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.3953
.018	.5213
.020	.5547
.022	.5992
.025	.6682
.028	.7078
.030	.7278
.036	.9528
.039	.9760
.041	.9835
.044	.9164
.049	.8360
.058	.6894
.068	.5956
.077	.5188

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 164

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G033)

MACH (5) = 1.458 ALPHA (1) = 4.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L	
.085	.4762
.093	.4482
.106	.3045
.118	.2879
.131	.2143
.167	.0041
.185	-.0771

MACH (6) = 1.954 ALPHA (1) = 4.980 PO = 28.007 Q(PS1) = 10.276 RN/L = 7.0500 P = 3.8470

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 45.0000

X/L	
.016	.2462
.018	.3110
.020	.3904
.022	.2590
.025	.4965
.028	.3679
.030	.3734
.036	.5078
.039	.6794
.041	.7699
.044	.7866
.049	.7358
.058	.6427
.068	.5839
.077	.5223
.085	.4796
.093	.4622
.106	.3213
.118	.3335
.131	.2365
.167	.0594
.185	.0048

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G033)

MACH (7) = 4.960 ALPHA (1) = 4.960 PO = 75.019 Q(PS1) = 2.5580 RN/L = 4.1800 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 45.0000

X/L

.016	.2488
.018	.2261
.020	.3108
.022	.2396
.025	.1777
.028	.1732
.030	.2321
.036	.2337
.039	.3259
.041	.4650
.044	.5632
.049	.6857
.058	.5270
.068	.4952
.077	.4378
.085	.4000
.093	.3652
.106	.2836
.118	.2790
.131	.2019
.167	.1611
.185	.0734

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G034) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 67.500
 PHI = .000

MACH (1) = .598 ALPHA (1) = -5.040 PO = 22.010 Q(PST) = 4.3280 RN/L = 4.9500 P = 17.280

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 .9807
 .018 .7466
 .020 .4738
 .022 .4469
 .025 .5295
 .028 .4399
 .030 .4414
 .036 .7627
 .039 .8444
 .041 .7616
 .044 .6662
 .049 .5988
 .058 .4674
 .068 .3517
 .077 .2729
 .085 .2170
 .093 .1784
 .106 .0317
 .118 .0104
 .131 -.0842
 .167 -.3088
 .185 -.3987

MACH (2) = .802 ALPHA (1) = -5.040 PO = 22.001 Q(PST) = 6.4860 RN/L = 5.9200 P = 14.404

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0625
 .018 .8331
 .020 .5496
 .022 .5341
 .025 .5991
 .028 .5037
 .030 .5001
 .036 .8154

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 167

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G034)

MACH (2) = .802 ALPHA (1) = -5.040

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	.9207
.041	.8409
.044	.7437
.049	.6705
.058	.5359
.068	.4216
.077	.3303
.085	.2725
.093	.2304
.106	.0735
.118	.0426
.131	-.0647
.167	-.3464
.185	-.4680

MACH (3) = .900 ALPHA (1) = -5.060 PO = 22 014 Q(PSI) = 7.3780 RN/L = 6.2500 P = 13.018

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.1200
.018	.8911
.020	.6007
.022	.5129
.025	.6462
.028	.5575
.030	.5523
.036	.8498
.039	.9692
.041	.8978
.044	.7930
.049	.7197
.058	.5966
.068	.4716
.077	.3806
.085	.3307
.093	.2802
.106	.1189
.118	.0966
.131	-.0190
.167	-.3039
.185	-.4450

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 169

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G034)

MACH (4) = 1.198 ALPHA (1) = -5.060 PO = 22.018 Q(PSI) = 9.1460 RN/L = 6.6500 P = 9.1010

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67 5000

X/L

.016	1.2907
.018	1.0801
.020	.8061
.022	.8019
.025	.8544
.028	.7866
.030	.7698
.036	1.0137
.039	1.1504
.041	1.0873
.044	1.0010
.049	.9320
.058	.8071
.068	.7036
.077	.6193
.085	.5690
.093	.5355
.106	.3911
.118	.3638
.131	.2748
.167	.0243
.185	-.0854

MACH (5) = 1.454 ALPHA (1) = -5.040 PO = 22.014 Q(PSI) = 9.4810 RN/L = 6.7200 P = 6.4030

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.5296
.018	1.0246
.020	.7608
.022	.6025
.025	.7347
.028	.7829
.030	.7400
.036	1.0965
.039	1.2437
.041	1.1736
.044	1.0614
.049	.9600
.058	.8408
.068	.7355
.077	.6662

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 169

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16034)

MACH (5) = 1.454 ALPHA (1) = -5.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	.6107
.093	.5928
.106	.4376
.118	.4210
.131	.3305
.167	.0992
.185	.0079

MACH (6) = 1.959 ALPHA (1) = -5.040 PO = 28.011 Q(PS1) = 10.248 RN/L = 7.0400 P = 3.8140

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.3952
.018	1.2372
.020	.8599
.022	.2953
.025	.3430
.028	.3317
.030	.2917
.036	.5126
.039	.8467
.041	.9928
.044	.9862
.049	.9475
.058	.8538
.068	.7374
.077	.6639
.095	.6158
.093	.5975
.106	.4468
.118	.4243
.131	.3396
.167	.1505
.185	.0711

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10034)

MACH (7) = 4.960 ALPHA (1) = -5.040 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.3300 P = .14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2035
.018	1.2678
.020	1.4235
.022	.2412
.025	.2291
.028	.1974
.030	.1854
.036	.2170
.039	.6207
.041	.8689
.044	.8339
.049	.9352
.058	.8024
.068	.6842
.077	.6101
.085	.5393
.093	.5179
.106	.4136
.118	.4243
.131	.3138
.167	.1869
.185	.1445

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 171

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG035) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
PREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA * 67.500
PHI = .000

MACH (1) = .598 ALPHA (1) = -4.040 PO = 22.005 Q(PSI) = 4.3310 RN/L = 4.9400 P = 17.272

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.9835
.018	.7457
.020	.4710
.022	.4735
.025	.5380
.028	.4853
.030	.4590
.036	.6856
.039	.8162
.041	.7582
.044	.6895
.049	.5935
.058	.4581
.068	.3466
.077	.2706
.085	.2070
.093	.1713
.106	.0238
.118	.0021
.131	-.0897
.167	-.3166
.185	-.4000

MACH (2) = 802 ALPHA (1) = -4.040 PO = 22.005 Q(PSI) = 6.4860 RN/L = 5.9100 P = 14.409

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.0699
.018	.8324
.020	.5417
.022	.5555
.025	.6024
.028	.5542
.030	.5262
.036	.7426

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G035)

MACH (2) = .802 ALPHA (1) = -4.040 ;

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	.8869
.041	.8380
.044	.7420
.049	.6645
.058	.5286
.068	.4127
.077	.3270
.085	.2644
.093	.2211
.106	.0647
.118	.0337
.131	-.0724
.157	-.3544
.185	-.4698

MACH (3) = .905 ALPHA (1) = -4.060 PO = 22.018 Q(PSI) = 7.4240 RN/L = 6.2600 P = 12.945

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.1236
.018	.8892
.020	.5947
.022	.6214
.025	.6557
.028	.6130
.030	.5821
.036	.7974
.039	.9359
.041	.8906
.044	.7979
.049	.7197
.058	.5863
.068	.4723
.077	.3827
.085	.3210
.093	.2780
.106	.1160
.118	.0864
.131	-.0188
.157	-.3106
.185	-.4459

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG035)

MACH (4) = 1.201 ALPHA (1) = -4.060 PO = 22.022 Q(PSI) = 9.1580 RN/L = 6 6700 P = 9.0640

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.3024
.018	1.0780
.020	.7947
.022	.8208
.025	.8570
.028	.8293
.030	.8051
.036	.9753
.039	1.1068
.041	1.0829
.044	1.0002
.049	.9290
.058	.8008
.068	.6952
.077	.6147
.085	.5623
.093	.5270
.106	.3841
.118	.3566
.131	.2681
.167	.0210
.185	-.0867

MACH (5) = 1.456 ALPHA (1) = -4.060 PO = 22.014 Q(PSI) = 9.4800 RN/L = 6.7100 P = 6.3900

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.4960
.018	.9377
.020	.7486
.022	.6111
.025	.7555
.028	.8049
.030	.7682
.036	1.0643
.039	1.2198
.041	1.1707
.044	1.0615
.049	.9579
.058	.8368
.068	.7290
.077	.6589

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G035)

MACH (5) = 1.456 ALPHA (1) = -4.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	.6045
.093	.5854
.106	.4304
.118	.4131
.131	.3260
.167	.0935
.185	.0013

MACH (6) = 1.957 ALPHA (1) = -4.060 PO = 28.019 Q(PSI) = 10.261 RN/L = 7.0300 P = 3.8270

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.3593
.018	1.0620
.020	.8519
.022	.2612
.025	.3416
.028	.3541
.030	.3189
.036	.5153
.039	.8127
.041	.9756
.044	.9882
.049	.9468
.058	.8500
.068	.7388
.077	.6650
.085	.6113
.093	.5937
.106	.4381
.118	.4223
.131	.3375
.167	.1488
.185	.0681

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G035)

MACH (7) = 4.960 ALPHA (1) = -4.080 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2400 P * .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2397
.018	.7250
.020	1.3751
.022	.3093
.025	.2473
.028	.2125
.030	.2276
.036	.2080
.039	.3440
.041	.9079
.044	.8535
.049	.9473
.058	.7870
.068	.6676
.077	.5935
.085	.5254
.093	.4997
.106	.4045
.118	.3969
.131	.3047
.167	.2246
.185	.1293

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G036) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 67.500
 PHI = .000

MACH (1) = 598 ALPHA (1) = -3.040 PO = 22.010 Q(PS1) = 4.3280 RN/L = 4.9400 P = 17.280

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 .9959
 .018 .7522
 .020 .4656
 .022 .5050
 .025 .5323
 .028 .5076
 .030 .5058
 .036 .6777
 .039 .7562
 .041 .7357
 .044 .6563
 .049 .5890
 .058 .4540
 .068 .3360
 .077 .2581
 .085 .2009
 .093 .1593
 .106 .0184
 .118 -.0030
 .131 -.0975
 .167 -.3178
 .185 -.4009

MACH (2) = .802 ALPHA (1) = -3.060 PO = 22.010 Q(PS1) = 6.4920 RN/L = 5.9200 P = 14.404

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0788
 .018 .8308
 .020 .5303
 .022 .5747
 .025 .6009
 .028 .5733
 .030 .5759
 .036 .7455

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G036)

MACH (2) = .802 ALPHA (1) = -3.060

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	.8225
.041	.8101
.044	.7354
.049	.6595
.058	.5187
.068	.4050
.077	.3115
.085	.2565
.093	.2127
.106	.0540
.118	.0248
.131	-.0783
.167	-.3618
.185	-.4700

MACH (3) = .908 ALPHA (1) = -3.060 PO = 22.022 Q(PSI) = 7.4460 RN/L = 6.2700 P = 12.913

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.1392
.018	.8897
.020	.5886
.022	.6254
.025	.6542
.028	.6297
.030	.6348
.036	.8009
.039	.8796
.041	.8660
.044	.7916
.049	.7164
.058	.5814
.068	.4628
.077	.3686
.085	.3154
.093	.2713
.106	.1105
.118	.0826
.131	-.0251
.167	-.3165
.185	-.4502

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG036)

MACH (4) = 1.201 ALPHA (1) = -3.060 PO = 22.026 Q(PSI) = 9.1600 RN/L = 6 6700 P = 9 0660

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.3256
.018	1.0777
.020	.7835
.022	.8303
.025	.8553
.028	.8410
.030	.8453
.036	.9840
.039	1.0522
.041	1.0527
.044	.9878
.049	.9225
.058	.7942
.068	.6839
.077	.5993
.085	.5548
.093	.5164
.106	.3733
.118	.3816
.131	.2611
.167	.0142
.185	-.0891

MACH (5) = 1.457 ALPHA (1) = -3.060 PO = 22.005 Q(PSI) = 9.4760 RN/L = 6.7100 P = 6.3730

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.4596
.018	.9076
.020	.7384
.022	.6166
.025	.7780
.028	.8242
.030	.7927
.036	1.0286
.039	1.1891
.041	1.1626
.044	1.0625
.049	.9576
.058	.8299
.068	.7245
.077	.6515

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G036)

MACH (5) = 1.457 ALPHA (1) = -3.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	.5964
.093	.5784
.106	.4225
.118	.4045
.131	.3213
.167	.0849
.185	-.0031

MACH (6) = 1.957 ALPHA (1) = -3.060 PO = 28.015 Q(PSI) = 10.260 RN/L = 7.0300 P = 3.8270

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.3327
.018	.9043
.020	.8352
.022	.2171
.025	.3482
.028	.3775
.030	.3515
.036	.5153
.039	.7696
.041	.9505
.044	.9885
.049	.9467
.058	.8529
.068	.7509
.077	.6640
.085	.6090
.093	.5892
.106	.4337
.118	.4254
.131	.3350
.167	.1468
.185	.0677

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G036)

MACH (7) = 4.960 ALPHA (1) = -3.060 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1900 P = .14900

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2654
.018	.4786
.020	1.2436
.022	.2699
.025	.2594
.028	.2397
.030	.2639
.036	.2276
.039	.3304
.041	.9639
.044	.9609
.049	1.0244
.058	.7613
.068	.6464
.077	.5678
.085	.5224
.093	.4861
.106	.3909
.118	.4015
.131	.2636
.167	.2521
.185	.1218

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10037) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SPEF = 85633 5996 SQ.IN. XMRP = 0000 IN. XT
LREF = 330 2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 67.500
PHI = .000

MACH (1) = .598 ALPHA (1) = -2.040 PO = 22.010 Q(PSI) = 4.3220 RN/L = 4.9300 P = 17.287

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0162
.018 .7554
.020 .4518
.022 .5155
.025 .5290
.028 .5152
.030 .5433
.036 .7099
.039 .7270
.041 .7108
.044 .6472
.049 .5795
.058 .4430
.068 .3293
.077 .2445
.085 .1940
.093 .1546
.106 .0122
.118 -.0119
.131 -.1014
.167 -.3262
.185 -.3997

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MACH (2) = .801 ALPHA (1) = -2.040 PO = 22.005 Q(PSI) = 6.4810 RN/L = 5.9200 P = 14.416

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.1066
.018 .8333
.020 .5195
.022 .5795
.025 .5971
.028 .5845
.030 .6054
.036 .7742

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G037)

MACH (2) = .801 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	.7993
.041	.7815
.044	.7205
.049	.6501
.058	.5072
.068	.3920
.077	.3011
.085	.2448
.093	.2030
.106	.0469
.118	.0130
.131	-.0855
.167	-.3730
.185	-.4724

MACH (3) = 908 ALPHA () -2.050 P0 = 22.018 Q(PSI) = 7.4450 RN/L = 6.2800 P = 12.910

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.1693
.018	.8861
.020	.5754
.022	.6294
.025	.6515
.028	.6404
.030	.6650
.036	.8307
.039	.8536
.041	.8390
.044	.7746
.049	.7059
.058	.5705
.068	.4526
.077	.3575
.085	.3051
.093	.2615
.106	.1027
.118	.0703
.131	-.0319
.167	-.3310
.185	-.4468

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G037)

MACH (4) = 1.201 ALPHA (1) = -2.040 PO = 22.014 Q(PSI) = 9.1530 RN/L = 6.6700 P = 9.0690

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.3356
.018	1.0828
.020	.7697
.022	.8320
.025	.8455
.028	.8492
.030	.8772
.036	1.0244
.039	1.0427
.041	1.0702
.044	.9678
.049	.9100
.058	.7818
.068	.6739
.077	.5901
.085	.5456
.093	.5052
.106	.3658
.118	.3391
.131	.2515
.167	.0049
.185	-.0926

MACH (5) = 1.462 ALPHA (1) = -2.060 PO = 22.010 Q(PSI) = 9.4750 RN/L = 6.7100 P = 6.3300

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.4302
.018	.8444
.020	.7226
.022	.6317
.025	.7826
.028	.8288
.030	.8189
.036	.9867
.039	1.1343
.041	1.1438
.044	1.0614
.049	.9583
.058	.8209
.068	.7186
.077	.6442

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G037)

MACH (5) = 1.462 ALPHA (1) = -2.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	.5870
.093	.5708
.106	.4098
.118	.4009
.131	.3178
.167	.0763
.185	-.0046

MACH (6) = 1.956 ALPHA (1) = -2.040 PO = 28.019 Q(PSI) = 10.270 RN/L = 7.0300 P = 3.8370

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.3146
.018	.8010
.020	.8025
.022	.1943
.025	.3572
.028	.3952
.030	.3752
.030	.5083
.039	.7272
.041	.9098
.044	.9780
.049	.9406
.058	.8480
.068	.7473
.077	.6579
.085	.6026
.093	.5837
.106	.4305
.118	.4185
.131	.3308
.167	.1388
.185	.0639

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G037)

MACH (7) = 4.960 ALPHA (1) = -2.040 PO = 75.019 Q(PSI) = 2 5580 RN/L = 4.1600 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	2730
.018	.3561
.020	1 2375
.022	2910
.025	.3531
.028	.4196
.030	.2956
.036	.4725
.039	.7779
.041	7794
.044	1.2768
.049	1.1997
.058	.7311
.068	.8974
.077	.8686
.085	5118
.093	6827
.106	6026
.118	3864
.131	.3743
.167	.2185
.185	1460

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10038) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 67.500
PHI = .000

MACH (1) = .598 ALPHA (1) = -1.030 PO = 22.001 Q(PSI) = 4.3210 RN/L = 4.9300 P = 17.280

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0067
.018 .7500
.020 .4374
.022 .4972
.025 .5194
.028 .5186
.030 .5595
.036 .7424
.039 .7263
.041 .7044
.044 .6327
.049 .5694
.058 .4325
.068 .3189
.077 .2341
.085 .1857
.093 .1454
.106 .0031
.118 - .0191
.131 - .1108
.167 - .3330
.185 - .4057

MACH (2) = .802 ALPHA (1) = -1.040 PO = 22.010 Q(PSI) = 6.4890 RN/L = 5.9300 P = 14.409

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0720
.018 .8273
.020 .4911
.022 .5616
.025 .5798
.028 .5985
.030 .6502
.036 .8237

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G03B)

MACH (2) = .802 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	.8018
.041	.7742
.044	.6967
.049	.6343
.058	.4983
.068	.3765
.077	.2878
.085	.2380
.093	.1881
.106	.0373
.118	.0074
.131	-.0986
.167	-.3779
.185	-.4802

MACH (3) = .905 ALPHA (1) = -1.040 PO = 22.018 Q(P51) = 7.4260 RN/L = 6.2800 P = 12.943

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.1194
.018	.8845
.020	.5435
.022	.6055
.025	.6405
.028	.6634
.030	.7063
.036	.8792
.039	.8604
.041	.8296
.044	.7551
.049	.6905
.058	.5555
.068	.4282
.077	.3439
.085	.2953
.093	.2470
.105	.0922
.118	.0617
.131	-.0438
.167	-.3398
.185	-.4550

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G038)

MACH (4) = 1.201 ALPHA (1) = -1.040 PO = 22.022 Q(PSI) = 9.1560 RN/L = 6.6900 P = 9.0740

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67 5000

X/L

016	1.2716
018	1.0849
020	.7456
022	.8035
025	.8430
.028	8661
.030	8988
036	1 0579
.039	1 0534
.041	1 0244
044	9587
049	8978
.058	7674
068	6641
077	5782
.085	5341
093	.4965
106	.3550
118	.3329
.131	2450
.167	- 0059
185	- 0951

MACH (5) = 1.464 ALPHA (1) = -1.060 PO = 22.010 Q(PSI) = 9.4740 RN/L = 6 7100 P = 6.3150

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

016	.4359
018	.7729
020	.7030
022	.6558
.025	7920
.028	8411
.030	.8402
036	.9634
.039	1.0824
041	1.1122
.044	1 0504
049	.9554
.058	.8125
068	7112
077	.6356

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TABULATED SOURCE DATA. MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG038)

MACH (5) = 1.464 ALPHA (1) = -1.060

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	5793
.093	5606
.106	3988
.118	3910
.131	3112
.167	0672
.185	-.0099

MACH (6) = 1.955 ALPHA (1) = -1.040 PO = 28.024 Q(PSI) = 10.274 RN/L = 7.0400 P = 3.8390

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	3102
.018	7027
.020	.7604
.022	.1947
.025	3671
.028	.4097
.030	3964
.035	4965
.039	.6979
.041	.8841
.044	.9622
.049	.9329
.058	.8464
.068	.7373
.077	.6512
.085	.5990
.093	.5740
.106	.4293
.118	.4164
.131	.3249
.167	.1347
.185	.0605

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10038)

MACH (7) = 4.960 ALPHA (1) = -1.060 PO = 75.028 Q(PSI) = 2.5590 RN/L = 4.3500 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

016	.2518
.018	.2594
.020	1.0361
.022	.2820
.025	.3138
.028	.3137
.030	.3077
.036	.3002
.039	.3046
.041	.4801
.044	1.0365
.049	1.1268
.058	.6781
.068	.6041
.077	.5313
.085	.4695
.093	.4544
.106	.3620
.118	.4226
.131	.2699
.167	.1717
.185	.1384

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G039) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 67.500
PHI = .000

MACH (1) = 598 ALPHA (1) = -.040 PO = 22.005 Q(PSI) = 4.3230 RN/L = 4.9400 P = 17.282

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 9888
.018 .7355
.020 .4264
.022 4127
.025 .5081
.028 .5411
.030 .5505
.036 .7189
.039 .7446
.041 .7053
.044 .6233
.049 .5600
.058 .4164
.068 .3026
.077 .2202
.085 .1722
.093 .1310
.106 -.0065
.118 -.0289
.131 -.1182
.167 -.3410
.185 -.4076

MACH (2) = .803 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 6.4960 RN/L = 5.9400 P = 14.399

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0750
.018 .8223
.020 .4846
.022 .5035
.025 .5750
.028 .6127
.030 .6252
.036 .7897

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 192

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G039)

MACH (2) = .803 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	.8159
.041	.7736
.044	.6957
.049	.6252
.058	.4804
.068	.3649
.077	.2737
.085	.2231
.093	.1758
.106	.0229
.118	-.0080
.131	-.1079
.167	-.3976
.185	-.4899

MACH (3) = .904 ALPHA (1) = -.040 PO = 22.018 Q(PS1) = 7.4170 RN/L = 6.2900 P = 12.958

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.1166
.018	.8836
.020	.5416
.022	.5521
.025	.6269
.028	.6635
.030	.6858
.036	.8418
.039	.8718
.041	.8322
.044	.7472
.049	.6822
.058	.5405
.068	.4204
.077	.3338
.085	.2816
.093	.2286
.106	.0785
.118	.0503
.131	-.0594
.167	-.3480
.185	-.4771

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 193

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG039)

MACH (4) = 1.201 ALPHA (1) = - .040 PO = 22.018 Q(PSI) = 9.1560 RN/L = 6.7000 P = 9.0640

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.2869
.018 1.0805
.020 .7430
.022 .7617
.025 .8312
.028 .8665
.030 .8842
.036 1.0297
.039 1.0601
.041 1.0260
.044 .9554
.049 .8923
.058 .7567
.068 .6517
.077 .5718
.085 .5245
.093 .4852
.106 .3469
.118 .4498
.131 .2377
.167 -.0165
.185 -.1015

MACH (5) = 1.463 ALPHA (1) = -.040 PO = 22.005 Q(PSI) = 9.4730 RN/L = 6.7200 P = 6.3250

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 .4192
.018 .7108
.020 .6846
.022 .6794
.025 .7982
.028 .8443
.030 .8545
.036 .9529
.039 1.0386
.041 1.0717
.044 1.0281
.049 .9447
.058 .8022
.068 .7026
.077 .6258

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 194

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG039)

MACH (5) = 1.463 ALPHA (1) = -.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	.5686
.093	.5499
.106	.3869
.118	.3816
.131	.3004
.167	.0591
.185	-.0152

MACH (6) = 1.953 ALPHA (1) = -.040 PO = 28.015 Q(PSI) = 10.281 RN/L = 7.0500 P = 3.8490

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.3030
.018	.6203
.020	.7288
.022	.2183
.025	.3818
.028	.4180
.030	.4115
.036	.4915
.039	.6750
.041	.8656
.044	.9508
.049	.9271
.058	.8392
.068	.7313
.077	.6381
.085	.5975
.093	.5659
.106	.4278
.118	.4085
.131	.3235
.167	.1241
.185	.0574

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G039)

MACH (7) = 4.960 ALPHA (1) = -.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2500 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

016	2805
018	.2488
.020	.8006
.022	.3531
.025	.3319
.028	.3350
.030	3516
.036	3213
.039	.3198
.041	4287
.044	.9064
.049	1.0803
.058	7265
.068	.5905
.077	5239
.085	4816
.093	4423
.106	.3546
.118	.3531
.131	.2579
.167	.2080
.185	.1067

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 196

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG040, (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = 0000 IN YT
 BREF = 330.2000 IN ZMRP = 0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = 67.500
 PHI = .000

MACH (1) = 598 ALPHA (1) = 960 PO = 22.010 Q(PSI) = 4.3220 RN/L = 4.9400 P = 17.287

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 .9843
 .018 .7327
 .020 .4066
 .022 .4611
 .025 .4738
 .028 .5139
 .030 .5371
 .035 .6996
 .039 .7437
 .041 .6990
 .044 .6180
 .049 .5479
 .058 .3994
 .068 .2892
 .077 .2071
 .085 .1570
 .093 .1190
 .106 - .0208
 .118 -.0441
 .131 -.1282
 .167 -.3544
 .195 -.4123

MACH (2) = .803 ALPHA (1) = .960 PO = 22.001 Q(PSI) = 6.4960 RN/L = 5.9100 P = 14.389

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0726
 .018 .8108
 .020 .4689
 .022 .5211
 .025 .5554
 .028 .5962
 .030 .6193
 .036 .7770

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 197

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G040)

MACH (2) = .803 ALPHA (1) = .960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	.8055
.041	.7694
.044	.6864
.049	.6135
.058	.4709
.068	.3540
.077	.2643
.085	.2135
.093	.1646
.106	.0121
.118	- 0.63
.131	- 1.82
.167	- 4.024
.185	- .4935

MACH (3) = .906 ALPHA (1) = .960 PO = 22.010 Q(PS1) = 7.4300 RN/L = 6.2600 P = 12.925

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.1329
.018	.8714
.020	.5309
.022	.5782
.025	.6063
.028	.6438
.030	.6625
.036	.8260
.039	.8634
.041	.8275
.044	.7445
.049	.6766
.058	.5278
.068	.4135
.077	.3239
.085	.2720
.093	.2241
.106	.0726
.118	.0365
.131	- .0635
.167	- .3561
.185	- .4738

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 198

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G040)

MACH (4) = 1.201 ALPHA (1) = .960 PO = 22.014 Q(PSI) = 9.1530 RN/L = 6.6600 P = 9.0690

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.2806
.018	1.0729
.020	.7295
.022	.7647
.025	.8149
.028	.8529
.030	.8825
.035	1.0237
.039	1.0504
.041	1.0173
.044	.9438
.049	.8834
.058	.7456
.068	.5400
.077	.5625
.085	.5145
.093	.4739
.106	.3372
.118	.3092
.131	.2268
.167	-.0245
.185	-.1082

MACH (5) = 1.458 ALPHA (1) = .960 PO = 22.005 Q(PSI) = 9.4760 RN/L = 6.7500 P = 6.3700

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.4004
.018	.6295
.020	.6752
.022	.6992
.025	.7972
.028	.8462
.030	.8621
.036	.9568
.039	1.0181
.041	1.0450
.044	1.0029
.049	.9283
.058	.7903
.068	.6915
.077	.6119

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 199

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G040)

MACH (5) = 1.458 ALPHA (1) = .960

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	.5584
.093	.5368
.106	.3768
.118	.3776
.131	.2837
.167	.0534
.185	-.0260

MACH (6) = 1.949 ALPHA (1) = .960 PO = 28.011 Q(PSI) = 10.305 RN/L = 7.0600 P = 3.8770

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2896
.018	.5468
.020	.6930
.022	.2256
.025	.3887
.028	.4152
.030	.4295
.036	.5002
.039	.6689
.041	.8702
.044	.9346
.049	.9109
.058	.8413
.068	.7212
.077	.6257
.085	.5960
.093	.5538
.106	.4197
.118	.4047
.131	.3216
.167	.1185
.185	.0559

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G040)

MACH (7) = 4.960 ALPHA (1) = .960 PO = 75.019 Q(PSI) = 2 5580 RN/L = 4.2000 P = .14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2805
.018	.2533
.020	.6570
.022	.3530
.025	.3153
.028	.3108
.030	.3259
.036	.3017
.039	.3002
.041	.4801
.044	.9775
.049	1.0727
.058	.7008
.068	.5920
.077	.5164
.085	.4725
.093	.4378
.106	.3455
.118	.3455
.131	.2548
.167	.1989
.185	.0991

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 201

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G041) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 67.500
PHI = .000

MACH (1) = .597 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 4.3080 RN/L = 4.9300 P = 17.300

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 9792
018 7180
.020 .3878
022 .5065
025 .4579
028 .4480
030 4939
036 6743
039 7291
041 6948
044 6079
049 5360
058 3881
068 .2755
077 1911
085 .1459
.093 .1022
106 -.0369
.118 -.0567
131 -.1438
167 - 3634
195 - 4196

MACH (2) = .802 ALPHA (1) = 1.960 PO = 22.001 Q(PSI) = 6.4830 RN/L = 5.9000 P = 14.409

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0664
.018 .7981
.020 .4528
022 .5670
025 .5351
.028 .5566
030 6021
.036 .7551

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G041)

MACH (2) = .802 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	.7873
.041	.7527
.044	.6764
.049	.6043
.058	.4539
.068	.3407
.077	.2507
.085	.1981
.093	.1500
.106	-.0020
.118	-.0330
.131	-.1302
.167	-.4179
.195	-.4992

MACH (3) = .904 ALPHA (1) = 1.960 PO = 22.010 Q(PSI) = 7.4130 RN/L = 6.2600 P = 12.955

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.1180
.018	.8521
.020	.5111
.022	.6170
.025	.5922
.029	.6110
.030	.6419
.036	.8066
.039	.8406
.041	.8060
.044	.7332
.049	.6636
.058	.5072
.068	.3996
.077	.3096
.085	.2513
.093	.2096
.106	.0592
.118	.0159
.131	-.0772
.167	-.3752
.195	-.4770

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G041)

MACH (4) = 1.199 ALPHA (1) = 1.960 PO = 22.018 Q(PSI) = 9.1490 RN/L = 6.6600 P = 9.0890

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.2924
.018	1.0444
.020	.7159
.022	.8246
.025	.7958
.028	.8140
.030	.8467
.036	.9892
.039	1.0247
.041	1.0036
.044	.9343
.049	.8741
.058	.7316
.068	.6272
.077	.5497
.085	.5016
.093	.4595
.106	.3251
.118	.5016
.131	.2149
.167	-.0367
.185	-.1149

MACH (5) = 1.454 ALPHA (1) = 1.960 PO = 22.001 Q(PSI) = 9.4760 RN/L = 6.7600 P = 6.4080

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.3886
.018	.6267
.020	.6665
.022	.6788
.025	.7857
.028	.8339
.030	.8580
.036	.9673
.039	1.0075
.041	1.0286
.044	.9845
.049	.9115
.058	.7731
.068	.6759
.077	.5963

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10041)

MACH (5) = 1.454 ALPHA (1) = 1.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67 5000

X/L

.085	5441
.093	5241
.106	3688
.118	3662
.131	2678
.167	0446
.185	- 0304

MACH (6) = 1.952 ALPHA (1) = 1.960 PO = 28.015 Q(PSI) = 10.288 RN/L = 7.0400 P = 3.8570

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67 5000

X/L

.016	.2721
.018	.5417
.020	.6697
.022	2359
.025	.3770
.028	4063
.030	.4037
.036	.4946
.039	.6615
.041	8345
.044	.9129
.049	.8900
.058	7996
.068	7030
.077	6105
.085	.5748
.093	.5444
.106	.4030
.118	.3853
.131	.3073
.167	.1093
.185	.0492

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G041)

MACH (7) = 4.960 ALPHA (1) = 1.950 PO = 75.003 Q(PSI) = 2.5580 RN/L = 4.1700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2715
.018	.2488
.020	.6348
.022	.3212
.025	.2745
.028	.2853
.030	.2941
.036	.2563
.039	.3080
.041	.6494
.044	1.0546
.049	1.1053
.058	.6630
.068	.5829
.077	.5273
.085	.4619
.093	.4317
.106	.3473
.118	.3561
.131	.2473
.167	.1974
.185	.0931

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G042) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = 67.500
 PHI = .000

MACH (1) = .596 ALPHA (1) = 2.980 PO = 22.010 Q(PSI) = 4.3080 RN/L = 4.9300 P = 17.305

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 .9533
 .018 .6979
 .020 .3971
 .022 .5147
 .025 .4862
 .028 .4679
 .030 .4658
 .036 .5831
 .039 .6312
 .041 .6529
 .044 .5974
 .049 .5289
 .058 .3740
 .068 .2601
 .077 .1800
 .085 .1303
 .093 .0878
 .106 - .0495
 .118 - .0702
 .131 - .1553
 .167 - .3751
 .185 -.4263

MACH (2) = .801 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 6.4760 RN/L = 5.9100 P = 14.424

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0559
 .018 .7748
 .020 .4570
 .022 .5797
 .025 .5466
 .028 .5323
 .030 .5439
 .036 .6757

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G042)

MACH (2) = .801 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	7188
.041	7277
.044	.6656
.049	.5959
.058	.4407
.068	.3243
.077	.2377
.085	.1841
.093	.1307
.106	-.0162
.118	-.0467
.131	-.1465
.167	-.4286
.185	-.5111

MACH (3) = 904 ALPHA (1) = 2.960 PO = 22.018 Q(PSI) = 7.4170 RN/L = 6.2600 P = 12.958

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.1129
.018	.8303
.020	.5168
.022	.6292
.025	.6062
.028	.5904
.030	.6009
.036	.7247
.039	.7682
.041	.7822
.044	.7242
.049	.6571
.058	.4998
.068	.3864
.077	.2957
.085	.2436
.093	.1906
.106	.0417
.118	-.0087
.131	-.0928
.167	-.3767
.185	-.4839

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G042)

MACH (4) = 1.195 ALPHA (1) = 2.960 PO = 22.005 Q(PSI) = 9.1310 RN/L = 6.6600 P = 9.1310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.2922
.018	1.0247
.020	.7285
.022	.8315
.025	.8194
.028	.8039
.030	.8094
.036	.9032
.039	.9459
.041	.9691
.044	.9278
.049	.8679
.058	.7226
.068	.6177
.077	.5357
.085	.4892
.093	.4453
.106	.3103
.118	.2859
.131	.2030
.167	-.0469
.185	-.1240

MACH (5) = 1.459 ALPHA (1) = 2.980 PO = 22.010 Q(PSI) = 9.4760 RN/L = 6.7500 P = 6.3550

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.4178
.018	.6421
.020	.6380
.022	.6491
.025	.7531
.028	.8087
.030	.8339
.036	.9679
.039	1.0010
.041	1.0180
.044	.9626
.049	.8948
.058	.7527
.068	.6597
.077	.5854

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16042)

MACH (5) = 1.459 ALPHA (1) = 2.980

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	.5300
.093	.5111
.106	.3539
.118	.3521
.131	.2686
.167	.0334
.185	-.0387

MACH (6) = 1.954 ALPHA (1) = 2.980 PO = 28.019 Q(PSI) = 10.277 RN/L = 7.0300 P = 3.8440

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2645
.018	.5323
.020	.6518
.022	.2487
.025	.3800
.028	.4029
.030	.4053
.036	.4967
.039	.6578
.041	.8269
.044	.8919
.049	.8714
.058	.7844
.068	.6881
.077	.5962
.085	.5615
.093	.5291
.106	.3913
.118	.3778
.131	.2982
.167	.1038
.185	.0443

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G042)

MACH (7) = 4.960 ALPHA (1) = 2.980 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.3400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	2352
.018	2382
.020	.5602
.022	.2216
.025	2352
.028	2382
.030	.2412
.036	.2382
.039	2881
.041	.8520
.044	1.0123
.049	1.0591
.058	6313
.058	5753
.077	.5043
.085	.4453
.093	.4272
.106	3350
.118	.4015
.131	2473
.167	.1475
.185	.1142

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)
MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

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(R1G043) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 67.500
PHI = .000

MACH (1) = .596 ALPHA (1) = 3.960 PO = 21.997 Q(PS1) = 4.2990 RN/L = 4.9200 P = 17.302

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 .9339
.018 .6769
.020 .4023
.022 .4947
.025 .5040
.028 .4860
.030 .4803
.036 .5292
.039 .5760
.041 .6052
.044 .5643
.049 .5130
.058 .3546
.068 .2420
.077 .1610
.085 .1148
.093 .0691
.106 - .0694
.118 - .0827
.131 - .1703
.167 - .3872
.185 - .4377

MACH (2) = .800 ALPHA (1) = 3.960 PO = 21.997 Q(PS1) = 6.4610 RN/L = 5.9000 P = 14.436

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016 1.0235
.018 .7528
.020 .4703
.022 .5594
.025 .5776
.028 .5590
.030 .5530
.036 .5362

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G043)

MACH (2) = .800 ALPHA (1) = 3.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.039	6411
.041	.6769
.044	6398
.049	.5842
.058	.4201
.066	.3085
.077	.2186
.085	.1669
.093	.1153
.106	-.0355
.118	-.0805
.131	-.1598
.157	-.4424
.185	-.5198

MACH (3) = .902 ALPHA (1) = 3.960 PO = 22.014 Q(PSI) = 7.3950 RN/L = 6.2600 P = 12 990

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.015	.0772
.018	.8088
.020	.5276
.022	.6119
.025	.6300
.028	.5178
.030	.6078
.036	.6499
.039	.6923
.041	.7289
.044	.6985
.049	.5451
.058	.4767
.066	.3660
.077	.2754
.085	.2219
.093	.1710
.106	.0222
.118	-.0103
.131	-.1101
.157	-.3967
.185	-.5007

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G043)

MACH (4) = 1.198 ALPHA (1) = 3.960 PO = 22.001 Q(PSI) = 9.1400 RN/L = 6.6600 P = 9.0910

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.2637
.018	1.0090
.020	.7335
.022	.8146
.025	.8354
.028	.8246
.030	.8197
.036	.8481
.039	.8873
.041	.9234
.044	.8984
.049	.8530
.058	.7012
.068	.5978
.077	.5188
.085	.4731
.093	.4295
.106	.2935
.118	.2708
.131	.1889
.167	-.0618
.185	-.1348

MACH (5) = 1.454 ALPHA (1) = 3.960 PO = 22.001 Q(PSI) = 9.4760 RN/L = 6.7600 P = 6.4050

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.4105
.018	.6629
.020	.6262
.022	.6184
.025	.7359
.028	.7939
.030	.8270
.036	.9796
.039	1.0008
.041	1.0144
.044	.9477
.049	.8743
.058	.7351
.068	.6425
.077	.5562

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OF POOR QUALITY

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16043)

MACH (5) = 1.454 ALPHA (1) = 3.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	.5158
.093	.4976
.106	.3413
.118	.3407
.131	.2503
.167	.0221
.185	-.0459

MACH (6) = 1.948 ALPHA (1) = 3.960 PO = 28.007 Q(PSI) = 10.306 RN/L = 7.0500 P = 3.8790

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2775
.018	.5208
.020	.6480
.022	.2694
.025	.3933
.028	.4112
.030	.4283
.036	.5013
.039	.6574
.041	.8255
.044	.8766
.049	.8649
.058	.7881
.068	.6763
.077	.5834
.085	.5511
.093	.5152
.106	.3895
.118	.3729
.131	.2909
.167	.0914
.185	.0417

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16043)

MACH (7) = 4.960 ALPHA (1) = 3.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2382
.018	.2441
.020	.6041
.022	.2517
.025	.2049
.028	.2064
.030	.2261
.036	.2064
.039	.4060
.041	1.0274
.044	.8958
.049	.9321
.058	.6419
.068	.5753
.077	.4937
.085	.4438
.093	.4151
.106	.3304
.118	.3123
.131	.2352
.167	.1671
.185	.0885

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G044) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 67.500
 PHI = .000

MACH (1) = .596 ALPHA (1) = 4.980 PO = 22.010 Q(PSI) = 4.3040 RN/L = 4.9300 P = 17.310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

016	9088
018	.6556
.020	3989
.022	.4682
.025	.5091
.028	.4998
.030	.4916
.036	.5154
.039	.5314
.041	.5750
.044	.5405
.049	.4944
.058	.3265
.068	.2297
.077	.1404
.085	.0923
.093	.0546
.106	-.0865
.118	-.1014
.131	-.1824
.167	-.4029
.185	-.4438

MACH (2) = .798 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 6.4500 RN/L = 5.9100 P = 14.461

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

016	.9918
.018	.7356
.020	.4658
.022	.5347
.025	.5761
.028	.5653
.030	.5598
.036	.5695

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16044)

MACH (2) = .798 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67 5000

X/L

0.39	5875
0.40	5846
0.41	5815
0.42	5783
0.43	5750
0.44	5717
0.45	5684
0.46	5651
0.47	5618
0.48	5585
0.49	5552
0.50	5519
0.51	5486
0.52	5453
0.53	5420
0.54	5387
0.55	5354
0.56	5321
0.57	5288
0.58	5255
0.59	5222
0.60	5189
0.61	5156
0.62	5123
0.63	5090
0.64	5057
0.65	5024
0.66	4991
0.67	4958
0.68	4925
0.69	4892
0.70	4859
0.71	4826
0.72	4793
0.73	4760
0.74	4727
0.75	4694
0.76	4661
0.77	4628
0.78	4595
0.79	4562
0.80	4529
0.81	4496
0.82	4463
0.83	4430
0.84	4397
0.85	4364
0.86	4331
0.87	4298
0.88	4265
0.89	4232
0.90	4199
0.91	4166
0.92	4133
0.93	4100
0.94	4067
0.95	4034
0.96	4001
0.97	3968
0.98	3935
0.99	3902
1.00	3869
1.01	3836
1.02	3803
1.03	3770
1.04	3737
1.05	3704
1.06	3671
1.07	3638
1.08	3605
1.09	3572
1.10	3539
1.11	3506
1.12	3473
1.13	3440
1.14	3407
1.15	3374
1.16	3341
1.17	3308
1.18	3275
1.19	3242
1.20	3209
1.21	3176
1.22	3143
1.23	3110
1.24	3077
1.25	3044
1.26	3011
1.27	2978
1.28	2945
1.29	2912
1.30	2879
1.31	2846
1.32	2813
1.33	2780
1.34	2747
1.35	2714
1.36	2681
1.37	2648
1.38	2615
1.39	2582
1.40	2549
1.41	2516
1.42	2483
1.43	2450
1.44	2417
1.45	2384
1.46	2351
1.47	2318
1.48	2285
1.49	2252
1.50	2219
1.51	2186
1.52	2153
1.53	2120
1.54	2087
1.55	2054
1.56	2021
1.57	1988
1.58	1955
1.59	1922
1.60	1889
1.61	1856
1.62	1823
1.63	1790
1.64	1757
1.65	1724
1.66	1691
1.67	1658
1.68	1625
1.69	1592
1.70	1559
1.71	1526
1.72	1493
1.73	1460
1.74	1427
1.75	1394
1.76	1361
1.77	1328
1.78	1295
1.79	1262
1.80	1229
1.81	1196
1.82	1163
1.83	1130
1.84	1097
1.85	1064
1.86	1031
1.87	998
1.88	965
1.89	932
1.90	899
1.91	866
1.92	833
1.93	800
1.94	767
1.95	734
1.96	701
1.97	668
1.98	635
1.99	602
2.00	569
2.01	536
2.02	503
2.03	470
2.04	437
2.05	404
2.06	371
2.07	338
2.08	305
2.09	272
2.10	239
2.11	206
2.12	173
2.13	140
2.14	107
2.15	74
2.16	41
2.17	8
2.18	-25
2.19	-58
2.20	-91
2.21	-124
2.22	-157
2.23	-190
2.24	-223
2.25	-256
2.26	-289
2.27	-322
2.28	-355
2.29	-388
2.30	-421
2.31	-454
2.32	-487
2.33	-520
2.34	-553
2.35	-586
2.36	-619
2.37	-652
2.38	-685
2.39	-718
2.40	-751
2.41	-784
2.42	-817
2.43	-850
2.44	-883
2.45	-916
2.46	-949
2.47	-982
2.48	-1015
2.49	-1048
2.50	-1081
2.51	-1114
2.52	-1147
2.53	-1180
2.54	-1213
2.55	-1246
2.56	-1279
2.57	-1312
2.58	-1345
2.59	-1378
2.60	-1411
2.61	-1444
2.62	-1477
2.63	-1510
2.64	-1543
2.65	-1576
2.66	-1609
2.67	-1642
2.68	-1675
2.69	-1708
2.70	-1741
2.71	-1774
2.72	-1807
2.73	-1840
2.74	-1873
2.75	-1906
2.76	-1939
2.77	-1972
2.78	-2005
2.79	-2038
2.80	-2071
2.81	-2104
2.82	-2137
2.83	-2170
2.84	-2203
2.85	-2236
2.86	-2269
2.87	-2302
2.88	-2335
2.89	-2368
2.90	-2401
2.91	-2434
2.92	-2467
2.93	-2500
2.94	-2533
2.95	-2566
2.96	-2599
2.97	-2632
2.98	-2665
2.99	-2698
3.00	-2731
3.01	-2764
3.02	-2797
3.03	-2830
3.04	-2863
3.05	-2896
3.06	-2929
3.07	-2962
3.08	-2995
3.09	-3028
3.10	-3061
3.11	-3094
3.12	-3127
3.13	-3160
3.14	-3193
3.15	-3226
3.16	-3259
3.17	-3292
3.18	-3325
3.19	-3358
3.20	-3391
3.21	-3424
3.22	-3457
3.23	-3490
3.24	-3523
3.25	-3556
3.26	-3589
3.27	-3622
3.28	-3655
3.29	-3688
3.30	-3721
3.31	-3754
3.32	-3787
3.33	-3820
3.34	-3853
3.35	-3886
3.36	-3919
3.37	-3952
3.38	-3985
3.39	-4018
3.40	-4051
3.41	-4084
3.42	-4117
3.43	-4150
3.44	-4183
3.45	-4216
3.46	-4249
3.47	-4282
3.48	-4315
3.49	-4348
3.50	-4381
3.51	-4414
3.52	-4447
3.53	-4480
3.54	-4513
3.55	-4546
3.56	-4579
3.57	-4612
3.58	-4645
3.59	-4678
3.60	-4711
3.61	-4744
3.62	-4777
3.63	-4810
3.64	-4843
3.65	-4876
3.66	-4909
3.67	-4942
3.68	-4975
3.69	-5008
3.70	-5041
3.71	-5074
3.72	-5107
3.73	-5140
3.74	-5173
3.75	-5206
3.76	-5239
3.77	-5272
3.78	-5305
3.79	-5338
3.80	-5371
3.81	-5404
3.82	-5437
3.83	-5470
3.84	-5503
3.85	-5536
3.86	-5569
3.87	-5602
3.88	-5635
3.89	-5668
3.90	-5701
3.91	-5734
3.92	-5767
3.93	-5800
3.94	-5833
3.95	-5866
3.96	-5899
3.97	-5932
3.98	-5965
3.99	-5998
4.00	-6031
4.01	-6064
4.02	-6097
4.03	-6130
4.04	-6163
4.05	-6196
4.06	-6229
4.07	-6262
4.08	-6295
4.09	-6328
4.10	-6361
4.11	-6394
4.12	-6427
4.13	-6460
4.14	-6493
4.15	-6526
4.16	-6559
4.17	-6592
4.18	-6625
4.19	-6658
4.20	-6691
4.21	-6724
4.22	-6757
4.23	-6790
4.24	-6823
4.25	-6856
4.26	-6889
4.27	-6922
4.28	-6955
4.29	-6988
4.30	-7021
4.31	-7054
4.32	-7087
4.33	-7120
4.34	-7153
4.35	-7186
4.36	-7219
4.37	-7252
4.38	-7285
4.39	-7318
4.40	-7351
4.41	-7384
4.42	-7417
4.43	-7450
4.44	-7483
4.45	-7516
4.46	-7549
4.47	-7582
4.48	-7615
4.49	-7648
4.50	-7681
4.51	-7714
4.52	-7747
4.53	-7780
4.54	-7813
4.55	-7846
4.56	-7879
4.57	-7912
4.58	-7945
4.59	-7978
4.60	-8011
4.61	-8044
4.62	-8077
4.63	-8110
4.64	-8143
4.65	-8176
4.66	-8209
4.67	-8242
4.68	-8275
4.69	-8308
4.70	-8341
4.71	-8374
4.72	-8407
4.73	-8440
4.74	-8473
4.75	-8506
4.76	-8539
4.77	-8572
4.78	-8605
4.79	-8638
4.80	-8671
4.81	-8704
4.82	-8737
4.83	-8770
4.84	-8803
4.85	-8836
4.86	-8869
4.87	-8902
4.88	-8935
4.89	-8968
4.90	-9001
4.91	-9034
4.92	-9067
4.93	-9100
4.94	-9133
4.95	-9166
4.96	-9199
4.97	-9232
4.98	-9265
4.99	-9298
5.00	-9331
5.01	-9364
5.02	-9397
5.03	-9430
5.04	-9463
5.05	-9496
5.06	-9529
5.07	-9562
5.08	-9595
5.09	-9628
5.10	-9661
5.11	-9694
5.12	-9727
5.13	-9760
5.14	-9793
5.15	-9826
5.16	-9859
5.17	-9892
5.18	-9925
5.19	-9958
5.20	-9991
5.21	-10024
5.22	-10057
5.23	-10090
5.24	-10123
5.25	-10156
5.26	-10189
5.27	-10222
5.28	-10255
5.29	-10288
5.30	-10321
5.31	-10354
5.32	-10387
5.33	-10420
5.34	-10453
5.35	-10486
5.36	-10519
5.37	-10552
5.38	-10585
5.39	-10618
5.40	-10651
5.41	-10684
5.42	-10717
5.43	-10750
5.44	-10783
5.45	-10816
5.46	-10849
5.47	-10882
5.48	-10915
5.49	-10948
5.50	-10981
5.51	-11014
5.52	-11047
5.53	-11080
5.54	-11113
5.55	-11146
5.56	-11179
5.57	-11212
5.58	-11245
5.59	-11278
5.60	-11311
5.61	-11344
5.62	-11377
5.63	-11410
5.64	-11443
5.65	-11476
5.66	-11509
5.67	-11542
5.68	-11575
5.69	-11608
5.70	-11641
5.71	-11674
5.72	-11707
5.73	-11740
5.74	-11773
5.75	-11806
5.76	-11839
5.77	-11872
5.78	-11905
5.79	-11938
5.80	-11971
5.81	-12004
5.82	-12037</

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 218

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16044)

MACH (4) = 1.195 ALPHA (1) = 4.980 PO = 22.014 Q(PSI) = 9.1340 RN/L = 6.6800 P = 9.1340

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	1.2349
.018	.9887
.020	.7278
.022	.7944
.025	.8338
.028	.8260
.030	.8249
.035	.8308
.039	.8552
.041	.9104
.044	.8782
.049	.8353
.058	.6791
.069	.5804
.077	.5015
.085	.4550
.093	.4139
.106	.2781
.118	.2555
.131	.1767
.157	-.0740
.185	-.1447

MACH (5) = 1.456 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 9.4760 RN/L = 6.7600 P = 6.3830

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.4213
.018	.6727
.020	.6143
.022	.5948
.025	.7115
.028	.7694
.030	.7988
.035	.9707
.039	.9927
.041	.9972
.044	.9319
.049	.8543
.058	.7147
.069	.6274
.077	.5502

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 219

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G044)

MACH (5) = 1.456 ALPHA (1) = 4.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.085	.4992
.093	.4825
.106	.3282
.118	.3237
.131	.2453
.167	.0115
.185	-.0534

MACH (6) = 1.946 ALPHA (1) = 4.970 PO = 28.007 Q(PSI) = 10.319 RN/L = 7.0600 P = 3.8940

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	.2610
.018	.5231
.020	.6650
.022	.2972
.025	.4172
.028	.4306
.030	.4245
.036	.5097
.039	.6568
.041	.8077
.044	.8715
.049	.8683
.058	.7694
.068	.6599
.077	.5795
.085	.5388
.093	.5019
.106	.3908
.118	.3589
.131	.2839
.167	.0836
.185	.0364

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 220

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G044)

MACH (7) = 4.960 ALPHA (1) = 4.970 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1900 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 67.5000

X/L

.016	2352
.018	2487
.020	5617
.022	.1959
.025	.1656
.028	1732
.030	.2049
.036	1913
.039	7280
.041	9775
.044	.7704
.049	.8278
.058	6328
.068	5587
.077	4907
.085	4378
.093	4045
.106	3198
.118	3153
.131	.2291
.167	1656
.185	0810

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16045) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 90.000
PHI = .000

MACH (1) = .629 ALPHA (1) = -5.040 PO = 22.005 Q(P51) = 4.6660 RN/L = 5.1200 P = 16.860

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 .9654
.018 .7030
.020 .4165
.022 .4016
.025 .5132
.028 .4897
.030 .4294
.036 .6211
.039 .7705
.041 .7159
.044 .6169
.049 .5433
.058 .4229
.068 .3107
.077 .2140
.085 .1751
.093 .1422
.106 .0106
.118 -.0266
.131 -.1200
.167 -.3414
.185 -.4255

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MACH (2) = 800 ALPHA (1) = -5.040 PO = 22.001 Q(P51) = 6.4670 RN/L = 5.8900 P = 14.431

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 1.0289
.018 .7819
.020 .4771
.022 .4857
.025 .5649
.028 .5459
.030 .4792
.036 .6509

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE (2

(R10045)

MACH (2) = .800 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.039	8302
.041	7783
.044	6790
.049	6082
.058	.4732
.068	3587
.077	.2569
.085	.2119
.093	.1734
.106	.0133
.118	-.0147
.131	-.1217
.167	- .3939
.185	- .5179

MACH (3) = 904 ALPHA (1) = -5.060 PO = 22.010 Q(PSI) = 7.4100 RN/L = 6.2600 P = 12.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.0828
.018	.8385
.020	.5341
.022	.5424
.025	.6188
.028	.5993
.030	.5333
.036	.6941
.039	.8745
.041	.8369
.044	.7349
.049	.6630
.058	.5322
.068	.4159
.077	.3127
.085	.2718
.093	.2307
.106	.0673
.118	.0421
.131	-.0721
.167	- .3449
.185	-.4921

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10045)

MACH (4) = 1.205 ALPHA (1) = -5.060 PO = 22.001 Q(PSI) = 9.1610 RN/L = 6.6600 P = 9.0160

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016	1.2744
018	1.0388
020	.7495
022	.7676
025	.8309
.028	.8162
.030	.7714
.036	.8846
039	1.0492
041	1.0402
044	.9543
049	.8841
.058	.7596
068	.6539
077	.5620
085	.5233
093	.4928
106	.3450
.118	.3250
131	.2359
167	-.0091
.185	-.1172

MACH (5) = 1.461 ALPHA (1) = -5.060 PO = 22.035 Q(PSI) = 9.4870 RN/L = 6.6500 P = 6.3530

SECTION (1) INTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016	.4967
.018	.8089
020	.6842
022	.5732
.025	.6834
.028	.7536
030	.7825
.036	.9608
039	1.0875
041	1.0939
044	1.0216
.049	.9234
058	.7959
.068	.6987
077	.6197

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G045)

MACH (5) = 1.461 ALPHA (1) = -5.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.085	.5663
.093	.5546
.106	.3939
.118	.3855
.131	.3013
.167	.0631
.185	-.0249

MACH (6) = 1.952 ALPHA (1) = -5.040 PO = 28.015 Q(PSI) = 10.290 RN/L = 7.0500 P = 3.8590

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.3107
.018	.8649
.020	.7724
.022	.2816
.025	.3304
.028	.3613
.030	.3625
.036	.4770
.039	.6998
.041	.8892
.044	.9507
.049	.9202
.058	.8329
.058	.7015
.077	.6253
.085	.5853
.093	.5725
.106	.4192
.118	.3869
.131	.3210
.167	.1175
.185	.0541

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 6J9 (TA3F) ET NOSE WITH NOSE CAP

(R1G045)

MACH (7) = 4.960 ALPHA (1) = -5 040 PO = 75.028 Q(PSI) = 2.5590 RN/L = 4.3300 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.2110
.018	.3728
.020	1 1736
.022	1835
.025	.2140
.028	1958
.030	1959
.036	.1959
.039	.2970
.041	6298
.044	.8263
.049	8880
.058	6766
.069	5835
.077	5358
.085	4922
.093	4635
.106	3711
.118	3350
.131	2699
.167	1596
.185	1203

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G046) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 90.000
 PHI = .000

MACH (1) = .603 ALPHA (1) = -4.040 PO = 22.005 Q(PSI) = 4 3760 RN/L = 4.9700 P = 17.217

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016	9652
.018	7149
.020	.4352
.022	.4713
.025	.5304
.028	5214
.030	.4879
.036	.5769
.039	.7135
.041	7192
.044	6349
.049	5588
.058	4236
.068	3115
.077	2333
.085	1802
.093	.1435
.106	.0030
.118	-.0205
.131	- 1110
.167	- 3196
.185	-.4023

MACH (2) = .800 ALPHA (1) = -4 040 PO = 22.001 Q(PSI) = 6.4640 RN/L = 5 8900 P = 14.436

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016	1.0459
.018	.7930
.020	.4898
.022	.5413
.025	.5882
.028	.5790
.030	.5548
.036	.6276

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G046)

MACH (2) = .800 ALPHA (1) = -4.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.039	7670
.041	.7896
.044	7053
.049	6227
.058	.4805
.068	3617
.077	2701
.085	2158
.093	.1788
.106	0145
.118	-.0135
.131	-.1151
.167	- .3951
.185	-.5060

MACH (3) = 905 ALPHA (1) = -4.060 PO = 22 005 Q(PSI) = 7.4200 RN/L = 6 2600 P = 12.938

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1 0988
.018	6520
.020	.5498
.022	5949
.025	6404
.028	.6337
.030	.6104
.036	.6789
.039	8243
.041	8452
.044	7618
.049	6821
.058	.5400
.068	4204
.077	3306
.085	2759
.093	.2391
.106	.0764
.118	.0416
.131	- .0626
.167	-.3491
.185	- .4806

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16046)

MACH (4) = 1.205 ALPHA (1) = -4.060 PO = 22.005 Q(PSI) = 9 1610 RN/L = 6.6500 P = 9.0210

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.2872
.018	1.0490
.020	.7564
.022	.8094
.025	.8430
.028	.8375
.030	.8269
.036	.8983
.039	.9958
.041	1.0330
.044	.9709
.049	.8979
.058	.7636
.068	.6530
.077	.5702
.085	.5254
.093	.4948
.106	.3485
.118	.3692
.131	.2394
.167	-.0099
.185	-.1129

MACH (5) = 1.462 ALPHA (1) = -4.080 PO = 21.993 Q(PSI) = 9.4680 RN/L = 6.6200 P = 6.3300

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.4675
.018	.7804
.020	.6842
.022	.5886
.025	.7128
.028	.7810
.030	.8059
.036	.9615
.039	1.0853
.041	1.1002
.044	1.0313
.049	.9350
.058	.8027
.068	.6956
.077	.6249

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G046)

MACH (5) = 1.462 ALPHA (1) = -4.080

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

085	.5705
093	.5572
106	.3949
118	.3861
.131	.3065
167	.0640
185	-.0217

MACH (6) = 1.948 ALPHA (1) = -4.060 PO = 28.011 Q(PSI) = 10 309 RN/L = 7.0500 P = 3 8820

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016	.3033
018	.7784
020	.7671
.022	.2324
025	.3411
.028	.3800
030	.3176
.036	.4964
039	.7085
041	.8936
044	.9594
049	.9298
.058	.8411
068	.7155
077	.6361
.085	.5904
093	.5782
106	.4175
118	.3948
131	.3253
167	.1212
185	.0563

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG046)

MACH (7) = 4.960 ALPHA (1) = -4.060 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2400 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016	2412
018	3334
.020	1.1302
.022	2579
.025	1898
.028	1974
.030	2261
.036	.2019
.039	5527
.041	9261
.044	8520
.049	9473
.058	6721
.068	5859
.077	5406
.085	4952
.093	4635
.105	3712
.118	3531
.131	2715
.167	1868
.185	1052

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 231

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G047) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN XMRP = .0000 IN XT
LREF = 330 2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN ZMRP = 0000 IN ZT
SCALE = 0091

PARAMETRIC DATA

BETA = .000 THETA = 90.000
PHI = .000

MACH (1) = 598 ALPHA (1) = -3.060 PO = 22.005 Q(PSI) = 4.3310 RN/L = 4.9500 P = 17.272

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016 9789
.018 7275
.020 4408
.022 5098
.025 5266
.028 5149
.030 5076
.036 6309
.039 6881
.041 6945
.044 6327
.049 5667
.058 4298
.068 3188
.077 2318
.085 1865
.093 1467
.106 0058
.118 -.0173
.131 -.1056
.167 - 3196
.185 - 3937

MACH (.2) = .799 ALPHA (1) = -3.040 PO = 22.001 Q(PSI) = 6.4570 RN/L = 5.8800 P = 14.446

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016 1.0624
.018 8064
.020 4931
.022 5713
.025 5864
.028 5686
.030 5624
.036 6847

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G047)

MACH (2) = .799 ALPHA (1) = -3.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.039	7539
.041	.7627
.044	.7015
.049	6292
.058	.4852
.068	3658
.077	2706
.085	2214
.093	1818
.106	.0182
.118	- 0105
.131	- 1142
.167	- 3921
.185	- 5044

MACH (3) = .906 ALPHA (1) = -3.040 PO = 22.005 Q(PSI) = 7.4270 RN/L = 6.2600 P = 12.925

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1 1180
.018	8576
.020	.5537
.022	.6213
.025	6399
.028	6255
.030	6166
.036	.7303
.039	8040
.041	8216
.044	7605
.049	6906
.058	5461
.068	.4241
.077	3324
.085	.2826
.093	.2416
.106	0810
.118	0478
.131	- 0584
.167	- 3470
.185	- 4728

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G047)

MACH (4) = 1.205 ALPHA (1) = -3.060 PO = 21.997 Q(PSI) = 9 1600 RN/L = 6.6500 P = 9.0090

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 1.3107
.018 1.0597
.020 .7621
.022 .8274
.025 .8411
.028 .8309
.030 .8237
.036 .9399
.039 1.0082
.041 1.0184
.044 .9643
.049 .9052
.058 .7684
.058 .6553
.077 .5751
.085 .5297
.093 .4949
.106 .3538
.118 .3266
.131 .2386
.167 -.0091
.185 -.1121

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MACH (5) = 1.464 ALPHA (1) = -3.060 PO = 22.010 Q(PSI) = 9.4740 RN/L = 6.6200 P = 6.3180

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 .4423
.018 .7405
.020 .6855
.022 .6169
.025 .7373
.028 .7994
.030 .8244
.036 .9540
.039 1.0777
.041 1.1042
.044 1.0385
.049 .9430
.053 .8084
.058 .6985
.077 .6275

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 234

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G047)

MACH (5) = 1.464 ALPHA (1) = -3.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.085	.5735
.093	.5565
.106	.3937
.118	.3863
.131	.3035
.167	.0664
.185	-.0196

MACH (6) = 1.947 ALPHA (1) = -3.040 PO = 28.019 Q(PSI) = 10.318 RN/L = 7.0500 P = 3 8890

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.3043
.018	.7179
.020	.7552
.022	.2120
.025	.3565
.028	.3995
.030	.3944
.036	.5041
.039	.7079
.041	.8882
.044	.9605
.049	.9436
.058	.8502
.068	.7266
.077	.6359
.095	.5977
.093	.5786
.106	.4194
.118	.4045
.131	.3290
.167	.1257
.185	.0570

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G047)

MACH (7) = 4.960 ALPHA (1) = -3.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2000 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	2699
.018	2956
.020	.9971
.022	2694
.025	2246
.028	2276
.030	2624
.036	2201
.039	3486
.041	9941
.044	9699
.049	1 0531
.058	.6479
.068	.5814
.077	5391
.085	5013
.093	4665
.106	.3667
.118	3788
.131	.2715
.167	.2140
.185	1036

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 230

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10048) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN YMRP = .0000 IN YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 90.000
 PHI = .000

MACH (1) = 599 ALPHA (1) = -2.040 PO = 22.005 Q(P51) = 4.3330 RN/L = 4.9600 P = 17.270

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 1.0022
 .018 7401
 .020 4309
 .022 .5160
 .025 .5058
 .028 4961
 .030 5151
 .036 7187
 .039 .7301
 .041 7075
 .044 6301
 .049 .5676
 .058 .4314
 .068 3225
 .077 2362
 .085 .1900
 .093 1490
 .106 .0130
 .118 -.0111
 .131 -.0995
 .167 -.3112
 .185 - 3822

MACH (2) = .799 ALPHA (1) = -2.040 PO = 22.005 Q(P51) = 6.4530 RN/L = 5.8900 P = 14.456

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 1.0848
 .018 .8115
 .020 4829
 .022 .5731
 .025 .5645
 .028 .5542
 .030 .5704
 .036 .7658

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 237

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16048)

MACH (2) = .799 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.039	.7886
.041	.7712
.044	.6963
.049	.6274
.058	.4835
.068	.3686
.077	.2724
.085	.2209
.093	.1811
.106	.0236
.118	-.0098
.131	-.1117
.167	-.3917
.185	-.4951

MACH (3) = 905 ALPHA (1) = -2.040 P0 = 21.997 Q(PSI) = 7.4190 RN/L = 6.2600 P = 12.930

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.11411
.018	.8700
.020	.5446
.022	.6277
.025	.6233
.028	.6128
.030	.6215
.036	.8096
.039	.8427
.041	.8279
.044	.7569
.049	.6889
.058	.5439
.068	.4297
.077	.3329
.085	.2822
.093	.2445
.106	.0833
.118	.0467
.131	-.0539
.167	-.3493
.185	-.4718

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G048)

MACH (4) = 1.205 ALPHA (1) = -2.040 PO = 22.001 Q(PSI) = 9.1610 RN/L = 6.6600 P = 9.0160

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.3259
.018	1.0691
.020	.7505
.022	.8272
.025	.8206
.028	.8223
.030	.8402
.036	1.0173
.039	1.0406
.041	1.0256
.044	.9595
.049	.9000
.058	.7659
.068	.6589
.077	.5744
.085	.5293
.093	.4952
.106	.3540
.118	.3650
.131	.2402
.167	-.0083
.185	-.1075

MACH (5) = 1.464 ALPHA (1) = -2.060 PO = 22.005 Q(PSI) = 9.4720 RN/L = 6.6200 P = 6.3130

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.4292
.018	.7188
.020	.6875
.022	.6491
.025	.7659
.028	.8178
.030	.8365
.036	.9509
.039	1.0687
.041	1.1014
.044	1.0485
.049	.9527
.058	.8087
.068	.7043
.077	.6311

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 239

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG048)

MACH (5) = 1.454 ALPHA (1) = -2.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.085	5737
.093	5581
.106	3953
.118	3863
.131	3081
.167	0651
.185	- 0164

MACH (6) = 1.945 ALPHA (1) = -2.060 PO = 28.011 Q(PSI) = 10.323 RN/L = 7.0600 P = 3.8970

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	3029
.018	6882
.020	747^
.022	2025
.025	.3729
.028	4147
.030	.4112
.036	5078
.039	7099
.041	8876
.044	9631
.049	.9496
.058	8625
.068	7322
.077	6380
.085	6095
.093	.5809
.106	.4260
.118	.4131
.131	.3343
.167	1282
.185	0589

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16048)

MACH (7) = 4.960 ALPHA (1) = -2.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1800 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.0107
.018	.2698
.020	.9004
.022	.2820
.025	.3607
.028	.3743
.030	.3168
.036	.9926
.039	.9019
.041	1.0410
.044	1.4643
.049	.9170
.058	.9578
.068	1.0682
.077	.6978
.085	.7477
.093	.8762
.106	.5345
.118	.4771
.131	.5224
.167	.2669
.185	.1989

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 241

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10049) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SO. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 90.000
PHI = .000

MACH (1) = 599 ALPHA (1) = -1.040 PO = 22.005 Q(PSI) = 4.3370 RN/L = 4.9600 P = 17.265

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016 .9951
.018 .7401
.020 .4274
.022 .4893
.025 .4909
.028 .5033
.030 .5472
.036 .7745
.039 .7623
.041 .7164
.044 .6282
.049 .5685
.058 .4296
.068 .3215
.077 .2327
.085 .1900
.093 .1529
.106 .0139
.118 - .0084
.131 - .0976
.167 -.3103
.185 -.3785

MACH (2) = .797 ALPHA (1) = -1.040 PO = 22.001 Q(PSI) = 6.4400 RN/L = 5.8900 P = 14.471

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016 1.0756
.018 .8169
.020 .4764
.022 .5578
.025 .5534
.028 .5634
.030 .6030
.036 .8273

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16049)

MACH (2) = .797 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.039	.8212
.041	.7795
.044	.6961
.049	.6251
.058	.4818
.068	.3651
.077	.2720
.085	.2236
.093	.1903
.106	.0243
.118	-.0081
.131	-.1109
.167	-.3935
.185	-.4924

MACH (3) = .905 ALPHA (1) = -1.040 PO = 22.001 Q(PSI) = 7.4130 RN/L = 6.2700 P = 12.945

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.1182
.018	.8753
.020	.5261
.022	.6153
.025	.6086
.028	.6209
.030	.6684
.036	.8826
.039	.8684
.041	.8378
.044	.7482
.049	.6790
.058	.5465
.068	.4253
.077	.3262
.085	.2869
.093	.2409
.106	.0765
.118	.0524
.131	-.0554
.167	-.3446
.185	-.4689

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16049)

MACH (4) = 1.205 ALPHA (1) = -1.040 PO = 22.005 Q(PSI) = 9.1620 RN/L = 6 6700 P = 9.0190

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.2754
.018	1.0760
.020	.7338
.022	.8014
.025	.8177
.028	.8512
.030	.8848
.036	.9687
.039	1.0679
.041	1.0330
.044	.9539
.049	.8964
.058	.7640
.068	.6570
.077	.5737
.085	.5297
.093	.4945
.105	.3545
.118	.3282
.131	.2414
.167	-.0162
.185	-.1053

MACH (5) = 1.463 ALPHA (1) = -1.040 PO = 22.014 Q(PSI) = 9.4760 RN/L = 6 6300 P = 6.3230

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.4261
.018	.6923
.020	.6871
.022	.6797
.025	.7830
.028	.8300
.030	.8439
.036	.9434
.039	1.0516
.041	1.0914
.044	.9454
.049	.9553
.058	.8084
.068	.7042
.077	.5304

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TNT 609 (TA3F)

PAGE 244

MSFC TNT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10049)

MACH (5) = 1.463 ALPHA (1) = -1.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L
.085 .5740
.093 .5553
.106 .3941
.118 .3841
.131 .3096
.167 .0635
.185 - 0164

MACH (6) = 1.945 ALPHA (1) = -1.040 PO = 28.011 Q(PSI) = 10.323 RN/L = 7.0500 P = 3.8970

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L
.016 3005
.018 6408
.020 7295
.022 .2048
.025 3861
.028 4216
.030 .4204
.036 5072
.039 .7026
.041 .8860
.044 .9667
.049 .9492
.058 .8650
.068 .7321
.077 .6374
.095 6084
.093 5803
.106 .4254
.118 4117
.131 .3340
.167 .1256
.185 .0596

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G049)

MACH (7) = 4.960 ALPHA (1) = -1.040 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.5900 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	2655
.018	2475
.020	.7432
.022	2851
.025	.3138
.028	.3138
.030	.3124
.036	3077
.039	3077
.041	5151
.044	1 0531
.049	1 0637
.058	6708
.068	6298
.077	.5495
.085	5090
.093	4831
.106	3833
.119	.3351
.131	.2775
.167	.1778
.185	1430

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G050) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMRP = 0000 IN. XT
LREF = 330.2000 IN YMRP = 0000 IN YT
BREF = 330.2000 IN ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 90.000
PHI = .000

MACH (1) = 597 ALPHA (1) = -.040 PO = 21.997 Q(PSI) = 4.3180 RN/L = 4.9500 P = 17.280

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016 9942
.018 7378
.020 4333
.022 4595
.025 .5040
.028 .5402
.030 .5663
.036 .7348
.039 .7583
.041 7185
.044 6257
.049 .5662
.058 .4302
.068 3144
.077 2313
.085 .1903
.093 .1454
.106 0105
.118 -.0093
.131 -.1013
.167 -.3146
.185 -.3839

MACH (2) = .797 ALPHA (1) = -.040 PO = 22.005 Q(PSI) = 6.4430 RN/L = 5.9000 P = 14.471

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016 1.0767
.018 8181
.020 4865
.022 5305
.025 5643
.028 5893
.030 .6231
.036 8103

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 247

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G050)

MACH (2) = .797 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

039	8219
041	7827
.044	6927
.049	6272
058	4821
068	3639
077	2714
.085	2223
093	1791
.106	.0226
118	-.0062
131	- 1100
167	-.3950
185	-.4922

MACH (3) = .935 ALPHA (1) = -.040 PO = 22.001 Q(PSI) = 7.4170 RN/L = 6.2800 P = 12.938

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016	1.1315
018	.8772
.020	.5394
022	.5823
.025	6190
.028	6489
030	.6851
036	8551
.039	8728
.041	.8348
.044	.7503
049	6849
.058	5401
068	4236
.077	3312
085	2820
.093	2391
.106	.0828
.118	.0484
131	- 0563
.167	- 3526
.185	- 4696

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 248

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16050)

MACH (4) = 1.204 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 9.1600 RN/L = 6.6800 P = 9.0340

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016	1.2806
.018	1.0827
.020	.7421
.022	.7712
.025	.8250
.028	.8569
.030	.8922
.036	1.0482
.039	1.0685
.041	1.0313
.044	.9544
.049	.8966
.058	.7589
.068	.6546
.077	.5740
.085	.5265
.093	.4906
.106	.3523
.118	.3671
.131	.2390
.167	-.0191
.85	- 1084

MACH (5) = 1.463 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 9.4740 RN/L = 6.6300 P = 6.3250

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016	.4237
.018	.5846
.020	.6928
.022	.6319
.025	.7912
.028	.8386
.030	.8212
.036	.9459
.039	1.0427
.041	1.0856
.044	1.0397
.049	.9549
.058	.8063
.068	.7055
.077	.6291

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG050)

MACH (5) = 1.463 ALPHA (1) = -.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.085	.5744
.093	.5541
.106	.3935
.118	.3665
.131	.3088
.167	.0619
.185	-.0172

MACH (6) = 1.954 ALPHA (1) = -.040 PO = 29.011 Q(PSI) = 10.275 RN/L = 7.0300 P = 3.8440

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.2990
.018	.5723
.020	.7267
.022	.1880
.025	.3812
.028	.4149
.030	.4108
.036	.4885
.039	.6771
.041	.8621
.044	.9418
.049	.9239
.058	.8478
.068	.7309
.077	.6421
.085	.5871
.093	.5679
.106	.4258
.118	.3958
.131	.3278
.167	.1163
.185	.0594

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 250

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10050)

MACH (7) = 4.960 ALPHA (1) = -.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.4100 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016	2866
018	2503
.020	.7205
022	3439
025	3380
028	3365
.030	3546
.036	3334
039	3304
041	4438
.044	.9684
049	1 0546
.058	6902
.068	.6343
.077	.5678
085	5239
.093	.4861
106	3848
118	3712
131	.2790
167	2185
.185	.1218

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 251

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G051) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 90.000
PHI = .000

MACH (1) = .599 ALPHA (1) = .980 PO = 22.005 Q(PSI) = 4 3330 RN/L = 4.9600 P = 17.270

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 1.0034
.018 .7347
.020 .4285
.022 .4824
.025 .4908
.028 .5132
.030 .5452
.036 .6953
.039 .7478
.041 .7105
.044 .6238
.049 .5614
.058 .4140
.068 .3050
.077 .2189
.085 .1702
.093 .1273
.106 - .0084
.118 -.0343
.131 - .1227
.167 - .3477
.185 - .4085

MACH (2) = 802 ALPHA (1) = .980 PO = 22.005 Q(PSI) = 5.4870 RN/L = 5.9200 P = 14.406

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 1.0866
.018 .8229
.020 .4961
.022 .5353
.025 .5585
.028 .5724
.030 .6094
.036 .7650

, DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 252

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G051)

MACH (2) = .802 ALPHA (1) = .980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.039	8121
.041	7852
.044	.6970
.049	6332
.058	4837
.068	3640
.077	.2743
.085	.2240
.093	1773
.106	0250
.118	-.0059
.131	-.1114
.167	- .3955
.185	-.4927

MACH (3) = .901 ALPHA (1) = .960 PO = 22.001 Q(PSI) = 7.3860 RN/L = 6.2500 P = 12.990

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.1413
.018	.8778
.020	.5386
.022	5664
.025	.6091
.028	.6384
.030	.6599
.036	.8265
.039	.8705
.041	.8411
.044	.7505
.049	.6851
.058	.5403
.068	.4206
.077	.3290
.085	2819
.093	2347
.106	0790
.118	0480
.131	- .0606
.167	-.3529
.185	- .4696

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10051)

MACH (4) = 1.201 ALPHA (1) = 960 PO = 21.993 Q(PSI) = 9.1460 RN/L = 6 6500 P = 9.0510

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 1.3063
.018 1.0804
.020 .7457
.022 .7769
.025 .8140
.028 .8407
.030 .8748
.036 1.0253
.039 1.0565
.041 1.0298
.044 .9535
.049 .8937
.058 .7583
.068 .6517
.077 .5681
.085 .5266
.093 .4882
.106 .3493
.118 .3210
.131 .2359
.167 .0175
.185 .1075

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MACH (5) = 1.458 ALPHA (1) = 960 PO = 22.010 Q(PSI) = 9.4770 RN/L = 6 6800 P = 6.3700

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 .4084
.018 .7054
.020 .6992
.022 .6695
.025 .7976
.028 .8438
.030 .8523
.036 .9658
.039 1.0536
.041 1.0860
.044 1.0315
.049 .9470
.058 .8009
.068 .7029
.077 .6278

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G051)

MACH (5) = 1.458 ALPHA (1) = 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.085	.5704
.093	.5494
.106	.3923
.118	.3872
.131	.2996
.167	.0600
.185	-.0187

MACH (6) = 1.956 ALPHA (1) = .960 PO = 28.032 Q(PSI) = 10.271 RN/L = 7.0400 P = 3.8340

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.2956
.018	.6282
.020	.7342
.022	.2140
.025	.3757
.028	.4130
.030	.4047
.036	.4820
.039	.6724
.041	.8483
.044	.9305
.049	.9176
.058	.8355
.068	.7206
.077	.6366
.085	.5849
.093	.5585
.106	.4246
.118	.3878
.131	.3259
.167	.1112
.185	.0586

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 255

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G051)

MACH (7) = 4.960 ALPHA (1) = , 960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.3000 P = ,14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.2760
.019	.2442
.020	.8112
.022	.3743
.025	.3123
.028	.3168
.030	.3304
.036	.3077
.039	.3138
.041	.5496
.044	1 .0274
.049	1 .0622
.058	.6721
.068	.6267
.077	.5663
.085	.5239
.093	.4877
.106	.3848
.118	.3667
.131	.2775
.167	.2049
.185	.1127

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 256

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G052) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN YMRP = .0000 IN YT
BREF = 330.2000 IN. ZMRP = .0000 IN ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 90.000
PHI = .000

MACH (1) = 600 ALPHA (1) = 1.960 PO = 22.010 Q(PSI) = 4.3450 RN/L = 4.9500 P = 17.260

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 9942
.018 7367
.020 4341
.022 .5278
.025 5102
.028 4911
.030 5044
.036 .6410
.039 .7101
.041 .6977
.044 6241
.049 .5614
.058 4091
.068 .3011
.077 .2141
.085 1660
.093 .1241
.106 -.0120
.118 -.0414
.131 -.1285
.167 -.3549
.185 -.4123

MACH (2) = .800 ALPHA (1) = 1.960 PO = 21.997 Q(PSI) = 5.4660 RN/L = 5.9000 P = 14.429

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 1.0809
.018 8152
.020 4982
.022 .5865
.025 .5756
.028 5604
.030 .5722
.036 .7153

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 257

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G052)

MACH (2) = .800 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.039	7805
.041	7758
.044	6985
.049	.6316
.058	.4772
.068	.3622
.077	.2734
.085	.2204
.093	.1740
.106	.0216
.118	-.0124
.131	- .1142
.167	- .4017
.185	-.4907

MACH (3) = .902 ALPHA (1) = 1.960 PO = 22.001 Q(PSI) = 7.3910 RN/L = 6.2400 P = 12.983

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016	1.1341
.018	.8643
.020	.5529
.022	.6345
.025	.6280
.028	.6120
.030	.6165
.036	.7647
.039	.8348
.041	.8266
.044	.7569
.049	.6884
.058	.5320
.068	.4212
.077	.3285
.085	.2742
.093	.2338
.106	.0774
.118	.0370
.131	- .0590
.167	- .3656
.185	- .4657

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 258

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16052)

MACH (4) = 1.196 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 9.1340 RN/L * 6.6500 P = 9.1190

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.3211
.018	1.0624
.020	.7576
.022	.8354
.025	.8322
.028	.8202
.030	.8363
.036	.9628
.039	1.0225
.041	1.0230
.044	.9602
.049	.8973
.058	.7563
.068	.6534
.077	.5701
.085	.5238
.093	.4869
.106	.3488
.118	.3532
.131	.2352
.167	-.0139
.185	-.1054

MACH (5) = 1.453 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 9.4780 RN/L = 6.6800 P = 6.4130

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.4054
.018	.7253
.020	.7025
.022	.6508
.025	.7939
.028	.8416
.030	.8502
.036	.9881
.039	1.0636
.041	1.0865
.044	1.0241
.049	.9363
.058	.7918
.068	.6968
.077	.6192

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G052)

MACH (5) = 1.453 ALPHA (1) = 1.960

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.085	.5662
.093	.5458
.106	.3899
.118	.3784
.131	.2903
.167	.0536
.185	-.0206

MACH (6) = 1.954 ALPHA (1) = 1.980 PO = 28.024 Q(PSI) = 10.278 RN/L = 7.0300 P = 3.8440

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.3031
.018	.6739
.020	.7480
.022	.2064
.025	.3831
.028	.4142
.030	.4032
.036	.4869
.039	.6719
.041	.8512
.044	.9262
.049	.9160
.058	.8287
.068	.7156
.077	.6327
.085	.5834
.093	.5535
.106	.4229
.118	.3874
.131	.3230
.167	.1105
.185	.0590

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G052)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2500 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.2790
.018	.2488
.020	.9457
.022	.3167
.025	.2790
.028	.2760
.030	.3108
.036	.2730
.039	.2987
.041	.7870
.044	.9941
.049	1.0682
.058	.6706
.068	.6192
.077	.5632
.085	.5270
.093	.4892
.106	.3848
.118	.3848
.131	.2805
.167	.2276
.185	.1172

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 261

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G053) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330 2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 90.000
PHI = .000

MACH (1) = .599 ALPHA (1) = 2.980 PO = 22.014 Q(PSI) = 4.3400 RN/L = 4.9500 P = 17.270

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 9671
.018 7268
020 4406
022 5250
025 5234
028 5047
030 4945
036 5649
039 6526
041 6791
044 6188
049 5617
058 4008
068 2936
.077 2098
.085 1600
.093 1154
.106 - 0181
.118 - 0459
.131 - 1340
.167 - 3598
.185 - 4155

MACH (2) = .799 ALPHA (1) = 2.980 PO = 22.001 Q(PSI) = 6.4550 RN/L = 5.9000 P = 14.449

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016 1 0510
.018 8072
.020 5032
.022 5863
.025 5916
.028 5731
.030 5681
.036 6475

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 262

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G053)

MACH (2) = .799 ALPHA (1) = 2.980

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.039	7137
.041	.7526
.044	.6937
.049	.6306
.058	.4697
.068	.3533
.077	.2669
.085	.2129
.093	.1642
.106	.0145
.118	-.0165
.131	- .1203
.167	-.4052
.185	-.4926

MACH (3) = .899 ALPHA (1) = 2.980 PO = 22.010 Q(PSI) = 7.3670 RN/L = 6.2400 P = 13.033

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016	1 1021
.018	8585
.020	5582
.022	.6346
.025	6422
.028	6248
.030	.6123
.036	7019
.039	7713
.041	.8019
.044	.7527
.049	6889
.058	5186
.068	.4144
.077	.3251
.085	.2611
.093	.2243
.106	.0694
.118	.0252
.131	- .0684
.167	-.3744
.185	-.4732

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16053)

MACH (4) = 1.192 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 9.1210 RN/L = 6.6500 P = 9.1640

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.2911
.018	1.0516
.020	.7681
.022	.8352
.025	.8485
.028	.8334
.030	.8300
.036	.9052
.039	.9666
.041	1.0052
.044	.9548
.049	.8979
.058	.7506
.068	.6472
.077	.5653
.085	.5190
.093	.4802
.106	.3426
.118	.3145
.131	.2298
.167	-.0248
.185	-.1108

MACH (5) = 1.455 ALPHA (1) = 2.980 PO = 22.010 Q(PSI) = 9.4790 RN/L = 6.6700 P = 6.3930

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.4160
.018	.7282
.020	.6887
.022	.6351
.025	.7678
.028	.8200
.030	.8408
.036	1.0124
.039	1.0725
.041	1.0889
.044	1.0177
.049	.9269
.058	.7820
.068	.6931
.077	.6148

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G053)

MACH (5) = 1.455 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.085	.5600
.093	.5425
.106	.3839
.118	.3727
.131	.2947
.167	.0496
.185	-.0199

MACH (6) = 1.957 ALPHA (1) = 2.980 PO = 28.007 Q(PSI) = 10.258 RN/L = 7.0200 P = 3.8270

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.3141
.018	.7223
.020	.7591
.022	.2571
.025	.3740
.028	.4095
.030	.3974
.036	.4871
.039	.6758
.041	.8541
.044	.9179
.049	.9081
.058	.8145
.068	.7093
.077	.6248
.085	.5809
.093	.5490
.106	.4200
.118	.3846
.131	.3140
.167	.1073
.185	.0545

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G053)

MACH (7) = 4.960 ALPHA (1) = 2 960 PO = 75 011 Q(PSI) = 2.5580 RN/L = 4 4700 P = 14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	2292
.018	2715
.020	1 0758
.022	.2095
.025	.2246
.028	.2337
.030	.2443
.036	2321
.039	3380
.041	1 0277
.044	9306
.049	1 0183
.058	.5678
.069	5162
.077	5602
.085	5181
.093	4861
.106	3879
.118	.4077
.131	.2775
.167	.1718
.185	.1354

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 265

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G054) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = 0000 IN. XT
 LREF = 330.2000 IN YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 90.000
 PHI = 000

MACH (1) = 599 ALPHA (1) = 3.960 PO = 22 010 Q(PSI) = 4.3350 RN/L = 4 9500 P = 17.272

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016 9515
 .018 .7171
 .020 4393
 .022 5047
 .025 .5247
 .028 5054
 .030 4991
 .036 5604
 .039 6144
 .041 .6701
 .044 6104
 .049 .5527
 .058 .3931
 .068 2871
 .077 2052
 .085 1535
 .093 .1094
 .106 - 0261
 .118 -.0503
 .131 - 1388
 .167 -.3656
 .185 -.4192

MACH (2) = .797 ALPHA (1) = 3 960 PO = 22 014 Q(PSI) = 6.4410 RN/L = 5.9000 P = 14.484

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

.016 1 0340
 .018 .7956
 .020 5010
 .022 5653
 .025 .5916
 .028 .5760
 .030 .5709
 .036 6169

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 267

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G054)

MACH (2) = .797 ALPHA (1) = 3.960

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.039	.6731
.041	.7397
.044	.6854
.049	.6233
.058	.4562
.068	.3474
.077	.2582
.085	.2034
.093	.1550
.106	.0057
.118	-.0235
.131	-.1258
.167	-.4127
.185	-.4957

MACH (3) = .910 ALPHA (1) = 3.960 PO = 22.005 Q(PSI) = 7.4580 RN/L = 6.2800 P = 12.873

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.0939
.018	.8471
.020	.5650
.022	.6124
.025	.6537
.028	.6418
.030	.6331
.036	.6703
.039	.7325
.041	.8041
.044	.7522
.049	.6910
.058	.5221
.068	.4130
.077	.3248
.085	.2696
.093	.2226
.106	.0701
.118	.0364
.131	-.0672
.167	-.3601
.185	-.4651

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G054)

MACH (4) = 1.190 ALPHA (1) = 3.960 PO = 22.010 Q(PSI) = 9.1150 RN/L = 6.6600 P = 9.1910

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

016	1.2560
018	1.0410
.020	.7679
.022	.8160
.025	.8529
.028	.8404
.030	.8322
036	.8763
039	.9257
041	.9871
044	.9497
.049	.8939
.058	.7384
.068	.6412
.077	.5582
.085	.5092
.093	.4737
.106	.3350
.118	.3068
.131	.2259
.167	-.0361
.185	-.1121

MACH (5) = 1.452 ALPHA (1) = 3.960 PO = 22.010 Q(PSI) = 9.4810 RN/L = 6.6800 P = 6.4280

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016	.4437
.018	.8233
.020	.6972
.022	.5948
.025	.7547
.028	.8142
.030	.8228
036	1.0289
039	1.0802
.041	1.0836
.044	1.0020
.049	.9162
.058	.7722
.068	.6816
.077	.6058

DATE 7. OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 269

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16054)

MACH (5) = 1.452 ALPHA (1) = 3.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.085	.5515
.093	.5319
.106	.3811
.118	.3703
.131	.2822
.167	.0418
.185	-.0262

MACH (6) = 1.944 ALPHA (1) = 3.960 PO = 28.024 Q(PSI) = 10.334 RN/L = 7.0600 P = 3.9070

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.3566
.018	.7780
.020	.7896
.022	.2927
.025	.4122
.028	.4257
.030	.4139
.036	.5141
.039	.6882
.041	.8699
.044	.9363
.049	.9270
.058	.8258
.068	.7106
.077	.6241
.085	.5863
.093	.5522
.106	.4179
.118	.3944
.131	.3265
.167	.1131
.185	.0581

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG054)

MACH (7) = 4 960 ALPHA (1) = 3 960 PO = 75.019 Q(PST) = 2 5580 RN/L = 4 3000 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	2412
.018	.2987
.020	1 1740
.022	.2533
.025	.2034
.028	.2034
.030	.2473
.036	.2080
.039	.4347
.041	8611
.044	8082
.049	9336
.058	.7069
.068	.6177
.077	.5527
.085	.5194
.093	4786
.106	3833
.118	3667
.131	2775
.167	.2170
.185	.1233

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG055) (28 AUG 75)

REFERENCE DATA -

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN XMRP = 0000 IN XT
LREF = 330.2000 IN. YMRP = 0000 IN YT
BREF = 330.2000 IN ZMRP = 0000 IN ZT
SCALE = .0091

BETA = 000 THETA = 90.000
PHI = 000

MACH (1) = .598 ALPHA (1) = 4 980 PO = 22 018 Q(PSI) = 4.3290 RN/L = 4.9500 P = 17.287

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90 0000

X/L

016 9351
.018 7043
.020 4359
.022 4836
025 4677
028 5037
.030 4705
.036 7084
039 6313
041 6698
044 5768
.049 5394
.058 3767
068 2780
.077 1932
.085 1400
.093 0991
.106 - 0342
.118 - 0628
131 - 1460
167 - 3764
185 - 4261

MACH (2) = .795 ALPHA (1) = 4 980 PO = 22.010 Q(PSI) = 6.4220 RN/L = 5.9000 P = 14.506

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016 1.0190
018 7861
020 5048
022 5452
025 5894
028 5729
030 5472
036 6315

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16055)

MACH (2) = .795 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

039	.6920
041	.7421
044	.6694
049	.6120
058	.4440
068	.3397
077	.2490
085	.1924
093	.1478
106	-.0007
118	-.0325
131	-.1300
.157	-.4223
.187	-.4969

MACH (3) = .906 ALPHA (1) = 4.980 PO = 22.001 Q(PSI) = 7.4280 RN/L = 6.2700 P = 12.920

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016	1.0757
018	.8400
020	.5653
022	.5960
025	.6471
028	.6332
030	.6080
036	.6809
039	.7491
.041	.8058
044	.7330
049	.6749
058	.5078
.058	.4032
077	.3116
085	.2571
093	.2114
106	.0578
118	.0267
131	-.0762
.167	-.3713
.185	-.4739

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 273

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G055)

MACH (4) = 1.193 ALPHA (1) = 4.960 PO = 22.005 Q(PSI) = 9.1240 RN/L = 6.6700 P = 9.1540

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	1.2589
.018	1.0292
.020	.7672
.022	.7948
.025	.8455
.028	.8359
.030	.8194
.036	.8820
.039	.9372
.041	.9987
.044	.9341
.049	.8825
.058	.7304
.068	.6313
.077	.5494
.085	.5049
.093	.4633
.106	.3290
.118	.3044
.131	.2195
.167	-.0371
.185	-.1155

MACH (5) = 1.457 ALPHA (1) = 4.960 PO = 22.010 Q(PSI) = 9.4780 RN/L = 6.6800 P = 6.3750

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

.016	.5229
.018	.8850
.020	.6948
.022	.5931
.025	.7237
.028	.7862
.030	.7968
.036	1.0001
.039	1.0571
.041	1.0670
.044	.9870
.049	.9090
.058	.7641
.068	.6752
.077	.6010

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G055)

MACH (5) = 1.457 ALPHA (1) = 4.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90 0000

X/L

085	5466
093	5262
105	3766
118	3666
131	2849
167	0409
185	- 0277

MACH (6) = 1.954 ALPHA (1) = 4.980 PO = 28.019 Q(PSI) = 10.282 RN/L = 7.0300 P = 3.8490

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 90 0000

X/L

016	3550
.018	8367
020	7924
022	3231
025	4053
029	4108
030	3930
036	4994
039	6759
041	6531
044	9207
049	9139
058	.6042
058	7020
.077	6142
.095	5766
043	5397
.06	4997
.18	3840
131	3157
.167	1071
.185	.0590

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16055)

MACH (7) = 4.960 ALPHA (1) = 4.960 PO = 75.019 Q(P31) = 2.5580 RN/L = 4.1900 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 90.0000

X/L

016	2185
018	3501
.020	1 2678
022	2427
.025	1732
028	.1747
030	.2155
036	1807
.039	.3440
.041	.6736
.044	.7825
049	9125
058	7023
068	6101
077	5451
085	.5134
.093	.4786
.106	3879
118	3591
131	2775
167	2004
185	.1157

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG056) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ IN. XMRP = .0000 IN XT
 LREF = 330 2000 IN YMRP = .0000 IN YT
 BREF = 330.2000 IN ZMRP = .0000 IN ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = 000 THETA = 180 000
 PHI = 000

MACH (1) = 600 ALPHA (1) = -5 040 PO = 22.014 Q(PSI) = 4.3460 RN/L = 4.9700 P = 17.262

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

016 7773
 .018 .5374
 .020 2740
 .022 3827
 .025 4341
 .028 .4863
 .030 .5350
 .036 .5454
 .039 5352
 .041 5056
 .044 4528
 .049 .3948
 .058 .2677
 .068 1615
 .077 0697
 .085 .0281
 .093 -.0049
 .106 -1399
 .118 -.1616
 .131 -.2400
 .167 -4289
 .185 -4697

MACH (2) = .799 ALPHA (1) = -5 040 PO = 22.010 Q(PSI) = 6 4600 RN/L = 5 9200 P = 14.451

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

016 8434
 018 6058
 020 .3387
 022 .4567
 025 5004
 .028 5494
 030 .5972
 036 5974

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 277

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G056)

MACH (2) = .799 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L	
.039	.5913
.041	.5624
.044	.5088
.049	.4572
.058	.3228
.068	.2107
.077	.1178
.085	.0640
.093	.0263
.106	-.1197
.118	-.1581
.131	-.2538
.167	-.5068
.185	-.5783

MACH (3) = .902 ALPHA (1) = -5.040 PO = 22.010 Q(PSI) = 7.3980 RN/L = 6.2600 P = 12.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L	
.016	.9035
.018	.6709
.020	.4004
.022	.5213
.025	.5573
.028	.5959
.030	.6389
.036	.6418
.039	.6336
.041	.6137
.044	.5646
.049	.5102
.058	.3921
.068	.2682
.077	.1730
.085	.1222
.093	.0855
.106	-.0694
.118	-.0359
.131	-.2029
.167	-.4777
.185	-.5766

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OF POOR QUALITY

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10056)

MACH (4) = 1.204 ALPHA (1) = -5.040 PO = 22.018 Q(PSI) = 9.1650 RN/L = 6.6600 P = 9.0310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.1040
.018	.8945
.020	.6379
.022	.7534
.025	.7827
.028	.7890
.030	.7943
.036	.8430
.039	.8595
.041	.8517
.044	.8109
.049	.7565
.058	.6352
.068	.5265
.077	.4446
.085	.3985
.093	.3703
.106	.2314
.118	.2221
.131	.1204
.167	-.1074
.185	-.1914

MACH (5) = 1.455 ALPHA (1) = -5.040 PO = 22.005 Q(PSI) = 9.4770 RN/L = 6.4800 P = 6.3930

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.4560
.018	.4764
.020	.5470
.022	.6286
.025	.6502
.028	.6805
.030	.7033
.036	.7633
.039	.7715
.041	.8029
.044	.7984
.049	.7784
.058	.6784
.068	.5756
.077	.4972

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G056)

MACH (5) = 1.455 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.085	.4462
.093	.4217
.09	.2931
.08	.2646
.031	.1854
.167	-.0467
.65	-.0774

MACH (5) = 1.961 ALPHA (1) = -5.040 PO = 28.003 Q(PSI) = 10.237 RN/L = 7.0300 P = 3.8040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.3266
.018	.3345
.020	.2892
.022	.3067
.023	.3290
.028	.3436
.030	.3455
.036	.3932
.039	.4671
.041	.5442
.044	.6011
.048	.6251
.059	.6100
.069	.5504
.077	.5110
.085	.4773
.093	.4427
.096	.2975
.118	.2903
.131	.2364
.167	.0398
.65	-.0228

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G056)

MACH (7) = 4.960 ALPHA (1) = -5.040 PO = 74.994 Q(PSI) = 2.5580 RN/L = 4.4400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016	.2383
018	.2579
.020	.2912
022	.3017
025	.1899
028	.1869
030	.2035
036	.2035
039	.2262
.041	.2973
044	.5014
049	.6784
058	.6572
068	.4788
077	.4258
085	.3835
093	.3608
106	.2776
.118	.3230
.131	.1899
.167	.1339
.185	.1067

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10057) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ IN XMRP = 0000 IN. XT
LREF = 330.2000 IN. YMRP = 0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 180.000
PHI = .000

MACH (1) = 800 ALPHA (1) = -4.020 PO = 22.018 Q(PSI) = 4.3460 RN/L = 4.9600 P = 17.267

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016 7894
018 5577
.020 .3089
.022 .3994
025 .4762
.028 .5239
030 5596
.036 .5698
.039 5533
.041 .5338
044 .4825
.049 .4262
059 .3031
068 1911
077 .1018
085 0609
093 .0236
106 - 1132
118 - 1322
131 -.2195
167 -.4092
185 - 4627

MACH (2) = 802 ALPHA (1) = -4.020 PO = 22.010 Q(PSI) = 6.4890 RN/L = 5.9300 P = 14.409

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016 .8590
018 .6608
020 .3810
022 .4772
025 .5426
.028 .5478
.030 .6143
036 6218

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16057)

MACH (2) = .902 ALPHA (1) = -4.020

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

039	.6294
041	.5881
.044	.5426
049	.5031
058	.3578
068	.2417
077	.1492
085	.0958
093	.0581
.106	-.0932
.118	-.1290
.131	-.2278
.167	-.4877
.185	-.5698

MACH (3) = .903 ALPHA (1) = -4.060 PO = 22.005 Q(PSI) = 7.4020 RN/L = 6.2600 P = 12.968

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016	.9190
.018	.7197
.020	.4349
.022	.5458
.025	.5847
.028	.5855
030	.5897
036	.6521
039	.6749
041	.6754
044	.6275
.049	.5614
058	.4219
068	.3007
077	.2018
085	.1532
093	.1174
.106	-.0433
.118	-.0752
.131	-.1770
.167	-.4542
.185	-.5581

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16057)

MACH (4) = 1.205 ALPHA (1) = -4.060 PO = 22.010 Q(PSI) = 9.1640 RN/L = 6.5600 P = 9.0210

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L
.016 1.1076
.018 .9357
.020 .6493
.022 .7532
.025 .7937
.028 .7960
.030 .8014
.036 .8715
.039 .8938
.041 .8905
.044 .8491
.049 .7867
.058 .6620
.068 .5534
.077 .4693
.085 .4234
.093 .3963
.106 .2530
.118 .2261
.131 .1428
.167 - .0910
.185 - .1755

MACH (5) = 1.457 ALPHA (1) = -4.060 PO = 22.014 Q(PSI) = 9.4800 RN/L = 6.4700 P = 6.3780

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L
.016 .4406
.018 .4952
.020 .5708
.022 .6511
.025 .6899
.028 .7225
.030 .7462
.036 .7980
.039 .8266
.041 .8425
.044 .8348
.049 .8102
.058 .7054
.068 .5988
.077 .5173

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G057)

MACH (5) = 1.457 ALPHA (1) = -4.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.085	.4684
.093	.4441
.106	.3097
.118	.2897
.131	.2041
.167	-.0288
.185	-.0664

MACH (6) = 1.962 ALPHA (1) = -4.060 PO = 28 015 Q(PSI) = 10 235 RN/L = 7.0100 P = 3 7990

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016	.3269
.018	.3249
.020	.3038
.022	.3126
.025	.3413
.028	.3564
.030	.3548
.036	.4154
.039	.5047
.041	.5958
.044	.6576
.049	.6798
.058	.6543
.068	.5846
.077	.5413
.085	.5002
.093	.4660
.106	.3171
.118	.3080
.131	.2518
.167	.0538
.185	-.0100

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16057)

MACH (7) = 4.960 ALPHA (1) = -4.080 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.2639
.018	.2412
.020	.3052
.022	.3591
.025	.2110
.028	.2064
.030	.2473
.036	.2185
.039	.2337
.041	.3395
.044	.5527
.049	.7552
.058	.6540
.068	.4982
.077	.4483
.085	.4196
.093	.3833
.106	.2941
.118	.2911
.131	.1974
.167	.1807
.185	.0855

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G059) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN XMRP = .0000 IN XT
 LREF = 330.2000 IN YMRP = 0000 IN YT
 BREF = 330.2000 IN ZMRP = 0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = 180 000
 PHI = .000

MACH (1) = 599 ALPHA (1) = -3.040 PO = 22 005 Q(PS1) = 4.3370 RN/L = 4.9600 P = 17.265

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L
 016 7950
 018 .6125
 .020 .3304
 022 3975
 025 4784
 028 .4982
 030 .5016
 .036 .6104
 039 .6381
 041 6167
 044 .5480
 049 .4731
 058 .3375
 068 .2234
 .077 12 11
 .085 0873
 .093 0535
 106 - 01 25
 118 -
 131 - 1 5
 167 2574
 185 - 1 2

MACH (2) = 803 ALPHA (1) = -3.040 PO = 22 010 Q(PS1) = 6 4990 RN/L = 5.9400 P = 14.394

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L
 .016 8663
 .018 7902
 020 3978
 022 4682
 025 .5349
 028 5424
 030 5555
 036 .6634

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16058)

MACH (2) = .803 ALPHA (1) = -3.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.039	.6963
.041	.6771
.044	.6116
.049	.5352
.058	.3929
.068	.2711
.077	.1738
.085	.1266
.093	.0889
.106	-.0692
.118	-.0991
.131	-.2015
.167	-.4649
.185	-.5521

MACH (3) = .904 ALPHA (1) = -3.060 PO = 22 010 Q(PSI) = 7.4160 RN/L = 6.2600 P = 12.950

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.9151
.018	.7749
.020	.4396
.022	.5372
.025	.5854
.028	.5908
.030	.6012
.036	.7054
.039	.7353
.041	.7247
.044	.6568
.049	.5908
.058	.4494
.068	.3260
.077	.2294
.085	.1798
.093	.1444
.106	-.0172
.118	-.0506
.131	-.1529
.167	-.4334
.185	-.5375

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G058)

MACH (4) = 1.204 ALPHA (1) = -3.060 PO = 22.010 Q(PST) = 9.1630 RN/L = 6.6600 P = 9.0240

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.1051
.018	.9688
.020	.6474
.022	.7345
.025	.7883
.028	.7989
.030	.8143
.036	.9213
.039	.9517
.041	.9396
.044	.8812
.049	.8116
.058	.6860
.068	.5725
.077	.4905
.085	.4479
.093	.4166
.106	.2736
.118	.2491
.131	.1623
.167	- .0741
.185	- .1632

MACH (5) = 1.458 ALPHA (1) = -3.060 PO = 22.001 Q(PST) = 9.4740 RN/L = 6.4600 P = 6.3650

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.4237
.018	.5021
.020	.5923
.022	.6753
.025	.7262
.028	.7605
.030	.7846
.036	.8348
.039	.8650
.041	.8862
.044	.8802
.049	.8495
.058	.7331
.068	.6208
.077	.5384

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG058)

MACH (5) = 1.458 ALPHA (1) = -3.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.085	.4915
.093	.4685
.106	.3286
.118	.3127
.131	.2242
.157	-.0114
.185	-.0587

MACH (6) = 1.959 ALPHA (1) = -3.060 PO = 28.007 Q(PSI) = 10.247 RN/L = 7.0100 P = 3.8140

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.3237
.018	.3271
.020	.3483
.022	.2862
.025	.3545
.028	.3762
.030	.3713
.036	.4371
.039	.5507
.041	.6609
.044	.7288
.049	.7376
.058	.6972
.068	.6239
.077	.5714
.085	.5220
.093	.4881
.106	.3377
.118	.3260
.131	.2711
.157	.0674
.185	.0036

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG058)

MACH (7) = 4.960 ALPHA (1) = -3.080 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1700 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	2730
.018	.2427
.020	.2639
.022	.3743
.025	2352
.028	2557
.030	2760
.036	2412
.039	.2533
.041	3697
.044	.6328
.049	.8263
.058	.6343
.068	.5285
.077	.4740
.085	.4514
.093	.4075
.106	3108
.118	.3153
.131	.2110
.167	.1974
.185	.0795

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G059) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 180.000
PHI = .000

MACH (1) = .598 ALPHA (1) = -2.020 PO = 22.010 Q(PSI) = 4.3280 RN/L = 4.9500 P = 17.280

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016 7987
018 .6453
020 3279
022 3454
025 4591
028 5121
030 5404
.036 6956
.039 .7053
041 .6544
044 5720
049 .4933
.058 .3595
.068 2433
.077 .1526
085 .1109
093 .0749
106 -.0656
.118 -.0859
.131 -.1776
167 -.3799
.185 -.4418

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MACH (2) = .803 ALPHA (1) = -2.040 PO = 22.010 Q(PSI) = 6.4950 RN/L = 5.9400 P = 14.399

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 .8679
018 .7296
020 3857
.022 4243
.025 5219
028 5716
030 5926
.036 .7497

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 292

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G059)

MACH (2) = .803 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

039	.7724
.041	.7231
.044	.6414
.049	.5561
.058	.4150
.068	.2970
.077	.1987
.085	.1529
.093	.1168
.106	- .0461
.118	-.0758
.131	- .1758
.167	- .4470
.185	- .5368

MACH (3) = .906 ALPHA (1) = -2.040 PO = 22.005 Q(P51) = 7.4300 RN/L = 6.2700 P * 12.920

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016	.9164
018	.8020
020	.4394
022	.5015
025	.5783
028	.6169
030	.6360
.036	.7873
039	.8125
041	.7760
044	.6950
049	.6142
.058	.4737
.068	.3526
077	.2573
085	.2073
.093	.1707
106	.0107
118	- .0230
131	- .1278
167	- .4106
185	- .5156

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 293

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10059)

MACH (4) = 1.195 ALPHA (1) = -2.040 PO = 22.018 Q(PSI) = 9.1340 RN/L = 6.6700 P = 9.1410

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.0876
.018	1.0019
.020	.6541
.022	.7060
.025	.8034
.028	.8368
.030	.8505
.036	.9546
.039	1.0046
.041	.9758
.044	.9041
.049	.8300
.058	.7040
.068	.5951
.077	.5108
.085	.4691
.093	.4381
.106	.2951
.118	.4915
.131	.1846
.167	-.0595
.185	-.1496

MACH (5) = 1.459 ALPHA (1) = -2.050 PO = 22.010 Q(PSI) = 9.4770 RN/L = 6.4600 P = 6.3580

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.4082
.018	.5319
.020	.6188
.022	.6878
.025	.7597
.028	.7972
.030	.8164
.036	.8690
.039	.9124
.041	.9389
.044	.9290
.049	.8924
.058	.7585
.068	.6405
.077	.5605

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 294

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10059)

MACH (5) = 1.459 ALPHA (1) = -2.000

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.085	5127
.093	4932
.106	3765
.118	3339
.131	2448
.167	0091
.185	- 0522

MACH (5) = 1.956 ALPHA (1) = -2.040 PO = 28.003 Q(PSI) = 10.260 RN/L = 7.0200 P = 3.8290

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	3226
.018	3503
.020	4326
.022	2432
.025	3592
.028	3907
.030	3841
.036	4553
.039	5962
.041	7279
.044	8000
.046	7963
.056	7393
.068	6476
.077	5950
.086	5405
.093	5104
.106	3579
.118	3445
.131	2872
.167	0805
.185	0172

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G059)

MACH (7) = 4.960 ALPHA (1) = -2.040 PO = 75 019 Q(PSI) = 2.5580 RN/L = 4.1200 P = .14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.2851
.018	.2473
.020	.2775
.022	.3712
.025	.2790
.028	.2896
.030	.3138
.036	.2851
.039	.3183
.041	.3833
.044	.6781
.049	.8112
.058	.6509
.068	.5557
.077	.5149
.085	.4695
.093	.4317
.106	.3622
.118	.3365
.131	.2276
.167	.2049
.185	.0915

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10060) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = 0000 IN. XT
 LREF = 330.2000 IN. YMRP = 0000 IN. YT
 BREF = 330.2000 IN. ZMRP = 0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 180.000
 PHI = .000

MACH (1) = .599 ALPHA (1) = -1.040 PO = 22.018 Q(PSI) = 4.3350 RN/L = 4.9600 P = 17.280

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 .8493
 .018 .6811
 .020 .3478
 .022 .3363
 .025 .4790
 .028 .5469
 .030 .5845
 .036 .7540
 .039 .7513
 .041 .6874
 .044 .6000
 .049 .5192
 .058 .3896
 .068 .2807
 .077 .1809
 .085 .1418
 .093 .1081
 .106 -.0377
 .118 -.0584
 .131 -.1445
 .167 -.3616
 .185 -.4176

MACH (2) = .803 ALPHA (1) = -1.040 PO = 22.014 Q(PSI) = 6.5040 RN/L = 5.9500 P = 14.391

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 .8854
 .018 .7851
 .020 .4092
 .022 .4080
 .025 .5566
 .028 .6158
 .030 .6440
 .036 .7879

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G060)

MACH (2) = .803 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.039	.8003
.041	.7486
.044	.6583
.049	.5783
.058	.4425
.068	.3242
.077	.2270
.085	.1821
.093	.1411
.106	-.0187
.118	-.0484
.131	-.1536
.167	-.4265
.185	-.5228

MACH (3) = 905 ALPHA (1) = -1.040 PO = 22.005 Q(PSI) = 7.4220 RN/L = 6.2800 P = 12.935

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.9415
.018	.8323
.020	.4598
.022	.4984
.025	.6208
.028	.6632
.030	.6808
.036	.8232
.039	.8457
.041	.8005
.044	.7173
.049	.6361
.058	.4982
.068	.3802
.077	.2867
.085	.2360
.093	.1986
.106	.0385
.118	.0024
.131	-.1029
.167	-.3893
.185	-.4989

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG060)

MACH (4) = 1.194 ALPHA (1) = -1.040 PO = 22.018 Q(PSI) = 9.1320 RN/L = 6.6800 P = 9.1490

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.1302
.018	1.0364
.020	.6844
.022	.7238
.025	.8266
.028	.8641
.030	.8814
.036	1.0000
.039	1.0374
.041	1.0007
.044	.9233
.049	.8522
.058	.7274
.068	.6181
.077	.5382
.085	.4939
.093	.4609
.106	.3196
.118	.5087
.131	.2040
.167	-.0396
.185	-.1345

MACH (5) = 1.459 ALPHA (1) = -1.060 PO = 22.001 Q(PSI) = 9.4730 RN/L = 6.4700 P = 6.3550

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.3939
.018	.6000
.020	.6540
.022	.6818
.025	.7867
.028	.8254
.030	.9385
.036	.9072
.039	.9720
.041	1.0067
.044	.9888
.049	.9303
.058	.7817
.068	.6613
.077	.5813

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G060)

MACH (5) = 1.459 ALPHA (1) = -1.060

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.085	.5356
.093	.5195
.106	.3657
.118	.3572
.131	.2683
.167	.0253
.185	-.0392

MACH (6) = 1.958 ALPHA (1) = -1.060 PO = 28.007 Q(PSI) = 10.251 RN/L = 7.0200 P = 3.8190

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016	.3054
.018	.4324
.020	.5556
.022	.2189
.025	.3574
.028	.3962
.030	.3868
.036	.4679
.039	.6481
.041	.7987
.044	.8704
.049	.8452
.058	.7678
.068	.6712
.077	.6145
.085	.5573
.093	.5332
.106	.3795
.118	.3646
.131	.3004
.167	.0949
.185	.0296

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G060)

MACH (7) = 4.960 ALPHA (1) = -1.040 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.3900 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	2563
.018	2535
.020	3244
.022	3153
.025	3185
.028	3213
.030	3213
.036	3185
.039	3183
.041	3576
.044	7994
.049	9790
.058	6509
.069	5710
.077	5134
.085	4786
.093	4515
.106	3561
.118	4121
.131	2534
.167	1550
.185	1234

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16061) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN XT
LRFF = 330.2000 IN. YMRP = .0000 IN YT
SREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 180.000
PHI = .000

MACH (1) = 602 ALPHA (1) = - 0.40 PO = 22.014 Q(PSI) = 4.3710 RN/L = 4.9800 P = 17.232

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.9822
.018	.7312
.020	.4133
.022	.4368
.025	.4850
.028	.5257
.030	.5651
.036	.7610
.039	.7672
.041	.7086
.044	.6256
.049	.5522
.059	.4172
.068	.3072
.077	.2143
.085	.1693
.093	.1311
.106	-.0059
.118	-.0378
.131	-.1280
.167	-.3487
.185	-.4128

MACH (2) = .803 ALPHA (1) = -.040 PO = 22.014 Q(PSI) = 6.5020 RN/L = 5.9600 P = 14.394

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.0376
.018	.8105
.020	.4522
.022	.4992
.025	.5525
.028	.5998
.030	.6408
.036	.8212

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G061)

MACH (2) = .803 ALPHA (1) = - 040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.039	.8267
.041	.7681
.044	.6833
.049	.6064
.058	.0000
.068	.0000
.077	.0000
.085	.0000
.093	.0000
.106	.0000
.118	.0000
.131	.0000
.157	.0000
.185	.0000

MACH (3) = .906 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 7.4320 RN/L = 6.3000 P = 12 923

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.0812
.018	.8645
.020	.5047
.022	.5634
.025	.6064
.028	.6513
.030	.6940
.036	.8697
.039	.8744
.041	.8243
.044	.7376
.049	.6627
.058	.5303
.068	.4087
.077	.3170
.085	.2682
.093	.2277
.106	.0684
.118	.0316
.131	-.0766
.167	-.3608
.185	-.4756

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG061)

MACH (4) = 1.193 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 9.1260 RN/L = 6.6900 P = 9.1540

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.2397
.018	1.0695
.020	7206
.022	7693
.025	.8158
.028	.8567
.030	.8912
.036	1.0561
.039	1.0656
.041	1 0210
.044	.9455
.049	.8753
.058	7522
.068	6451
.077	.5642
.085	.5190
.093	.4870
.106	3455
.118	.4618
.131	2264
.167	- 0180
.185	-.1154

MACH (5) = 1.459 ALPHA (1) = -.040 PO = 22.005 Q(PSI) = 9.4750 RN/L = 6.4700 P = 6.3600

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.4053
.018	.7271
.020	7034
.022	.6577
.025	8021
.028	8385
.030	8462
.036	.9434
.039	1.0385
.041	1 0785
.044	1 0406
.049	9565
.059	.7993
.068	.6613
.077	6025

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G061)

MACH (5) = 1.459 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

085	5584
093	.5425
106	3878
118	.3796
.131	.2914
.167	.0416
185	- .0253

MACH (6) = 1.953 ALPHA (1) = -.040 PO = 28.015 Q(PS1) = 10.281 RN/L = 7.0400 P = 3.8490

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016	2948
018	.6043
.020	7037
.022	2070
.025	.3470
028	3885
030	3805
.036	4941
039	7165
041	8810
044	9379
049	8867
058	.8175
.068	.6953
.077	6336
.085	5809
.093	5520
.106	4032
.118	3843
.131	3286
.167	1097
.185	.0484

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G061)

MACH (7) = 4.960 ALPHA (1) = -.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	2851
.018	.2488
.020	.6131
.022	.4228
.025	.3395
.028	.3380
.030	.3507
.036	.3380
.039	.3350
.041	.4226
.044	.8989
.049	.0380
.058	.6872
.068	.5995
.077	.5421
.085	.5149
.093	.4771
.106	.3773
.118	.3682
.131	.2699
.167	.2170
.185	.1157

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10062) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 50. IN. XMRP = 0000 IN. XT
LREF = 330.2000 IN. YMRP = 0000 IN. YT
BREF = 330 2000 IN. ZMRP = 0000 IN. ZT
SCALE = 0091

PARAMETRIC DATA

BETA = .000 THETA = 180.000
PHI = .000

MACH (1) = 599 ALPHA (1) = .960 PO = 22.014 Q(PSI) = 4.3340 RN/L = 4.9600 P = 17.277

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016 1 0140
.018 7641
.020 4424
.022 5043
.025 4951
.028 5127
.030 5287
.036 7741
.039 7689
.041 7321
.044 6462
.049 5680
.058 4404
.068 3770
.077 2348
.085 1906
.093 1508
.106 0094
.118 - 0163
.131 - 1103
.167 - 3339
.185 - 4009

MACH (2) = 802 ALPHA (1) = .960 PO = 22.001 Q(PSI) = 6.4860 RN/L = 5.9300 P = 14.404

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016 1.1085
.018 .8352
.020 .5131
.022 5680
.025 5618
.028 5763
.030 5946
.036 .8363

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16062)

MACH (2) = 802 ALPHA (1) = .960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.039	.8553
.041	8098
.044	.7200
.049	.6395
.058	5081
.068	.3882
.077	.2936
.085	2440
.093	2008
.106	0426
.118	0074
.131	- 1010
.167	- 3800
.185	- 4811

MACH (3) = 901 ALPHA (1) = .960 P0 = 22 010 Q(PSI) = 7 3840 RN/L = 6.2600 P = 13.003

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016	1.1522
.018	.8858
.020	.5542
.022	.6139
.025	6143
.028	6244
.030	6116
.036	8799
.039	8947
.041	8605
.044	.7730
.049	6899
.058	5568
.068	.4371
.077	3496
.085	2934
.093	2532
.106	.0897
.118	0991
.131	-.0538
.167	- 3481
.185	- 4661

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G062)

MACH (4) = 1.194 ALPHA (1) = .960 PO = 22.010 Q(PSI) = 9.1280 RN/L = 6 6500 P = 9.1490

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016	1 3267
.018	1.0898
.020	.7677
.022	.8168
.025	8211
.028	8355
.030	8626
.036	1 0749
.039	1 0905
.041	1 0512
.044	.9741
.049	.9029
.058	7800
.068	6736
.077	5894
.085	.5169
.093	.5129
.106	3674
.118	.3676
.131	2519
.167	0044
.185	- 0947

MACH (5) = 1.456 ALPHA (1) = .960 PO = 22.001 Q(PSI) = 9.4750 RN/L = 6.4900 P = 6.3850

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016	.4498
.018	.8314
.020	.7601
.022	.6592
.025	.8115
.028	8523
.030	.8166
.036	.9833
.039	1.1047
.041	1.1294
.044	1.0682
.049	.9724
.058	.8180
.068	7013
.077	6245

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G062)

MACH (5) = 1.456 ALPHA (1) = .960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.085	.5825
.093	.5641
.106	.4158
.118	.4009
.131	.3111
.167	.0572
.185	-.0023

MACH (6) = 1.956 ALPHA (1) = .960 PO = 28.011 Q(PSI) = 10.264 RN/L = 7.0400 P = 3.8320

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.3418
.018	.7816
.020	.8241
.022	.2249
.025	.3474
.028	.3826
.030	.3738
.036	.5023
.039	.7634
.041	.9492
.044	.9867
.049	.9218
.058	.8449
.068	.7127
.077	.6514
.095	.6050
.093	.5770
.106	.4240
.118	.4073
.131	.3417
.167	.1275
.185	.0643

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G062)

MACH (7) = 4.960 ALPHA (1) = 960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA -180.0000

X/L

.016	.2730
.018	.2554
.020	1.1408
.022	.4105
.025	.3153
.028	.3168
.030	.3380
.036	.3168
.039	.3244
.041	.5617
.044	.9790
.049	1.0924
.058	.7054
.068	.6328
.077	.5708
.085	.5375
.093	.5043
.106	.4015
.118	.3788
.131	.2911
.167	.2155
.185	.1218

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 311

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G063) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

PARAMETRIC DATA

BETA = .000 THETA = 180.000
PHI = .000

MACH (1) = 602 ALPHA (1) = 1.970 PO = 22.010 Q(PS1) = 4.3710 RN/L = 4.9700 P = 17.227

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 1.0291
.018 .7865
.020 .4763
.022 .5498
.025 .5067
.028 .5002
.030 .4863
.036 .8449
.039 .8429
.041 .7697
.044 .6767
.049 .5973
.058 .4695
.068 .3588
.077 .2634
.085 .2180
.093 .1808
.106 .0372
.118 .0090
.131 -.0839
.167 -.3159
.185 -.3858

MACH (2) = .802 ALPHA (1) = 1.960 PO = 22.001 Q(PS1) = 6.4810 RN/L = 5.9200 P = 14.411

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 1.1090
.018 .8596
.020 .5411
.022 .6028
.025 .5748
.028 .5631
.030 .5526
.036 .8874

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G063)

MACH (2) = .802 ALPHA (1) = 1.950

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.039	9072
.041	8425
.044	.7502
.049	6657
.058	5347
.068	4191
.077	3241
.085	2693
.093	.2323
.106	.0718
.118	0333
.131	- 0718
.167	- 3575
.185	-.4566

MACH (3) = 912 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 7.4730 RN/L = 6.2800 P = 12 848

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.1635
.018	.9072
.020	.5934
.022	6472
.025	.6325
.028	.6146
.030	.6064
.036	9335
.039	9579
.041	9031
.044	8099
.049	7270
.058	.5903
.068	4737
.077	3796
.085	3273
.093	2891
.106	.1284
.118	0891
.131	-.0175
.167	- 3152
.185	-.4328

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 313

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G063)

MACH (4) = 1.203 ALPHA (1) = 1.960 PO = 22.010 Q(PSI) = 9.1580 RN/L = 6.6500 P = 9.0410

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.3479
.018	1.1043
.020	.8026
.022	.8544
.025	.8348
.028	.8217
.030	.8090
.036	1.1064
.039	1.1443
.041	1.0950
.044	1.0071
.049	.9327
.058	.8073
.068	.6992
.077	.6177
.085	.5729
.093	.5379
.106	.3951
.118	.3689
.131	.2743
.167	.0263
.185	-.0748

MACH (5) = 1.455 ALPHA (1) = 1.960 PO = 22.010 Q(PSI) = 9.4790 RN/L = 6.4800 P = 6.3930

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.4727
.018	.9488
.020	.7849
.022	.6396
.025	.8107
.028	.8478
.030	.8661
.036	1.0315
.039	1.1546
.041	1.1693
.044	1.0895
.049	.9881
.058	.8404
.068	.7270
.077	.6487

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G063)

MACH (5) = 1.455 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.085	6086
.093	.5878
.106	4390
.118	.4176
.131	3355
.167	0810
.185	0126

MACH (6) = 1.952 ALPHA (1) = 1.960 PO = 28.011 Q(PSI) = 10.289 RN/L = 7.0400 P = 3.8590

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	4197
.018	1 0347
.020	9068
.022	.2621
.025	.3565
.028	.3784
.030	.3637
.036	.5232
.039	8237
.041	1 0105
.044	1 0352
.049	9520
.058	.8643
.068	7350
.077	.6742
.085	6276
.093	6041
.106	.4487
.118	.4269
.131	.3693
.167	.1428
.185	.0812

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 315

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10063)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.019 Q(PS1) = 2.5580 RN/L = 4.0800 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.2609
.018	.3668
.020	.9427
.022	.3652
.025	.3864
.028	.4604
.030	.3062
.036	1.2028
.039	1.1015
.041	.7870
.044	1.8544
.049	.8460
.058	.7341
.058	1.1075
.077	.6721
.085	.5617
.093	1.0501
.106	.5511
.118	.4030
.131	.6449
.157	.2246
.185	.2503

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G064) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ IN. XMRP = .0000 IN. XT
 LREF = 330 2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 180.000
 PHI = .000

MACH (1) = .602 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 4.3720 RN/L = 4.9700 P = 17.222

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 1.0169
 .018 .8123
 .020 .4406
 .022 .5836
 .025 .4131
 .028 .6294
 .030 .7298
 .036 .9242
 .039 .8209
 .041 .7528
 .044 .6801
 .049 .6161
 .058 .4922
 .068 .3865
 .077 .2962
 .085 .2484
 .093 .2088
 .106 .0701
 .118 .0355
 .131 -.0582
 .167 -.2957
 .185 -.3686

MACH (2) = 800 ALPHA (1) = 2.960 PO = 22.005 Q(PSI) = 6.4650 RN/L = 5.9100 P = 14.439

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 1.1010
 .018 .8825
 .020 .5355
 .022 .6373
 .025 .5227
 .028 .5313
 .030 .6195
 .036 1.0194

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G054)

MACH (2) = 800 ALPHA (1) = 2.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L
039 9273
041 8450
044 7582
049 6852
058 5591
069 4462
077 3522
085 2977
093 2580
106 1030
118 0597
131 - 0455
167 - 3356
185 - 4358

MACH (3) = .910 ALPHA (1) = 2.970 PO = 22.010 Q(PSI) = 7.4630 RN/L = 6.2800 P = 12.870

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L
016 1.1545
018 9290
020 5988
022 6816
025 6056
028 5890
030 6395
036 1.0467
039 9866
041 9099
044 8223
049 7461
058 6151
068 5009
077 4085
085 3540
093 3163
106 1581
118 1141
131 0079
167 - 2889
185 - 4130

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG064)

MACH (4) = 1.199 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 9,1450 RN/L = 6.6600 P = 9.0810

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016	1,3343
.018	1,1235
.020	.8073
.022	.8808
.025	.8143
.028	.7994
.030	.8356
.036	1,2187
.039	1,1757
.041	1,1050
.044	1,0199
.049	.9474
.058	.8301
.069	.7250
.077	.6419
.095	.5979
.093	.5626
.106	.4182
.118	.3924
.131	.2977
.167	.0443
.185	-.0567

MACH (5) = 1.453 ALPHA (1) = 2.980 PO = 21.997 Q(PSI) = 9.4750 RN/L = 6.4800 P = 6.4150

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.6102
.018	1,1616
.020	.8037
.022	.6237
.025	.8233
.028	.8601
.030	.8517
.036	1,0938
.039	1,2010
.041	1,1895
.044	1,1036
.049	1,0038
.058	.8609
.068	.7510
.077	.6743

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 319

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G064)

MACH (5) = 1.453 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.085	.6302
.093	.6111
.106	.4628
.118	.4419
.131	.3556
.167	.0973
.185	.0442

MACH (6) = 1.959 ALPHA (1) = 2.980 PO = 28.007 Q(PSI) = 10.244 RN/L = 7.0100 P = 3.8120

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.5471
.018	1.3417
.020	.9184
.022	.2941
.025	.3506
.028	.3643
.030	.3512
.036	.5461
.039	.8806
.041	1.0721
.044	1.0736
.049	.9969
.058	.8796
.068	.7625
.077	.6936
.085	.6543
.093	.6296
.106	.4693
.118	.4527
.131	.3762
.167	.1621
.185	.0953

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G064)

MACH (7) = 4.960 ALPHA (1) = 2 980 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.3700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.2201
.018	.8036
.020	1.2889
.022	.3486
.025	.2412
.028	.2397
.030	.2473
.036	.2382
.039	.3712
.041	.8989
.044	.9760
.049	1.1196
.058	.7522
.068	.6857
.077	.6252
.085	.5829
.093	.5542
.106	.4499
.118	.4468
.131	.3334
.167	.2019
.185	.1611

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 321

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16065) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330 2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 180.000
PHI = .000

MACH (1) = 602 ALPHA (1) = 3.960 PO = 22.022 Q(PSI) = 4.3740 RN/L = 4.9800 P = 17.237

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 1.0199
.018 .8393
.020 .4618
.022 6039
.025 4921
.028 .7406
.030 8055
.036 8893
.039 8183
.041 7648
.044 7000
.049 6374
.058 5203
.068 4151
.077 3214
.085 2749
.093 2373
.106 0973
.118 0605
.131 -.0324
.167 -2769
.185 -3518

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MACH (2) = 799 ALPHA (1) = 3.960 PO = 22.005 Q(PSI) = 6.4600 RN/L = 5.9200 P = 14.446

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 1.1038
.018 .9042
.020 .5174
.022 6592
.025 .6118
.028 .7887
.030 8518
.036 9417

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16065)

MACH (2) = .799 ALPHA (1) = 3.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.039	.8897
.041	.8398
.044	.7698
.049	.7050
.058	.5884
.068	.4747
.077	.3811
.085	.3299
.093	.2867
.106	.1301
.118	.0923
.131	-.0197
.167	-.3047
.185	-.4160

MACH (3) = .907 ALPHA (1) = 3.960 PO = 22.014 Q(PSI) = 7.4380 RN/L = 6.2800 P = 12.918

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.1532
.018	.9542
.020	.5775
.022	.7032
.025	.5634
.028	.7681
.030	.8624
.036	1.0324
.039	.9608
.041	.9039
.044	.8260
.049	.7598
.058	.6401
.068	.5239
.077	.4290
.085	.3830
.093	.3378
.106	.1774
.118	.1405
.131	.0273
.167	-.2692
.185	-.3974

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G065)

MACH (4) = 1.194 ALPHA (1) = 3.950 PO = 22.001 Q(PSI) = 9.1260 RN/L = 6.6600 P = 9.1390

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.3314
.018	1.1428
.020	.8168
.022	.8979
.025	.7943
.028	.8151
.030	.9033
.036	1.2648
.039	1.1805
.041	1.1072
.044	1.0312
.049	.9652
.058	.8503
.068	.7507
.077	.6664
.085	.6210
.093	.5866
.106	.4434
.118	.4150
.131	.3205
.157	.0620
.185	-.0380

MACH (5) = 1.457 ALPHA (1) = 3.950 PO = 22.001 Q(PSI) = 9.4740 RN/L = 6.4700 P = 6.3730

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.8687
.018	1.2748
.020	.7911
.022	.6270
.025	.8127
.028	.8417
.030	.8601
.036	1.1205
.039	1.2218
.041	1.2044
.044	1.1184
.049	1.0254
.058	.8879
.068	.7743
.077	.7009

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16065)

MACH (5) = 1.457 ALPHA (1) = 3.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.085	.6567
.093	.6315
.106	.4866
.118	.4689
.131	.3825
.167	.1217
.185	.0388

MACH (6) = 1.950 ALPHA (1) = 3.960 PO = 28.007 Q(PSI) = 10.297 RN/L = 7.0400 P = 3.8690

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.7276
.018	1.6389
.020	.9017
.022	.3584
.025	.3706
.028	.3748
.030	.3525
.036	.5973
.039	.9524
.041	1.1349
.044	1.1278
.049	1.0489
.058	.9164
.068	.7815
.077	.7207
.085	.6852
.093	.6511
.106	.4976
.118	.4764
.131	.4180
.167	.1798
.185	.1165

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 325

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G085)

MACH (7) = 4 960 ALPHA (1) = 3 960 PO = 75 019 Q(PSI) = 2 5580 RN/L = 4.2000 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	2201
.018	2 5997
.020	.7658
.022	.2004
.025	.2034
.028	.2034
.030	.2367
.036	.2291
.039	7930
.041	8777
.044	1.0153
.049	1.1423
.058	7885
.068	7129
.077	6494
.085	6162
.093	.5889
.106	.4771
.118	.4393
.131	.3546
.167	.2367
.185	.1596

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 326

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G066) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = 0000 IN. YT
BREF = 330.2000 IN. ZMRP = 0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 180.000
PHI = .000

MACH (1) = 602 ALPHA (1) = 4.980 PO = 22.010 Q(PSI) = 4.3690 RN/L = 4.9800 P = 17 230

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 1 0309
.018 8205
.020 .4990
.022 3854
.025 5094
.028 .7479
.030 .8246
.036 .9074
.039 .8392
.041 7865
.044 .7243
.049 .6602
.058 5474
.068 .4475
.077 .3493
.085 .3048
.093 2663
.106 .1216
.118 .0869
.131 -.0069
.157 -.2557
.185 -.3358

MACH (2) = 796 ALPHA (1) = 4.960 PO = 22.001 Q(PSI) = 6.4280 RN/L = 5.9200 P = 14.489

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016 1.1081
.018 .8923
.020 .5514
.022 .4151
.025 .6158
.028 .8082
.030 .8651
.036 9544

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 327

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G066)

MACH (2) = 796 ALPHA (1) = 4 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.039	.9078
.041	.8561
.044	.7881
.049	.7290
.058	.6090
.068	.4959
.077	.4080
.085	.3540
.093	.3098
.106	.1584
.118	.1424
.131	.0050
.167	-.2867
.185	-.3955

MACH (3) = 906 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 7.4230 RN/L = 6.2800 P = 12.933

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016	1.1608
.018	.9418
.020	.6037
.022	.4536
.025	.6735
.028	.8531
.030	.9103
.036	1.0084
.039	.9660
.041	.9165
.044	.8498
.049	.7844
.058	.6660
.068	.5545
.077	.4590
.085	.4103
.093	.3687
.106	.2091
.118	.1665
.131	.0562
.167	-.2491
.185	-.3711

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 328

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G066)

MACH (4) = 1.190 ALPHA (1) = 4.980 PO = 22.010 Q(PSI) = 9.1130 RN/L = 6.6700 P = 9.1990

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.3360
.018	1.1603
.020	.8085
.022	.9040
.025	.8750
.028	1.0491
.030	1.0957
.036	1.1908
.039	1.1539
.041	1.1034
.044	1.0414
.049	.9795
.058	.8755
.068	.7749
.077	.6900
.085	.6471
.093	.6115
.106	.4676
.118	.4391
.131	.3424
.167	.0809
.185	-.0204

MACH (5) = 1.453 ALPHA (1) = 4.980 PO = 21.997 Q(PSI) = 9.4740 RN/L = 6.4800 P = 6.4080

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.0606
.018	1.4203
.020	.8074
.022	.6829
.025	.8454
.028	.8678
.030	.8984
.036	1.1357
.039	1.2175
.041	1.2071
.044	1.1304
.049	1.0416
.058	.9103
.068	.8009
.077	.7249

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 329

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G066)

MACH (5) = 1.453 ALPHA (1) = 4.980

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.085	.6820
.093	.6559
.106	.5107
.118	.4893
.131	.4052
.167	.1390
.185	.0663

MACH (6) = 1.955 ALPHA (1) = 4.960 PO = 28.011 Q(PSI) = 10.271 RN/L = 7.0300 P = 3.8390

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.0265
.018	1.7866
.020	8808
.022	4141
.025	3905
.028	3736
.030	3398
.036	6156
.039	.9813
.041	1.1977
.044	1.1736
.049	1.0780
.058	9361
.068	8083
.077	7420
.085	7095
.093	.6786
.106	.5173
.118	.5036
.131	.4259
.167	.1998
.185	.1318

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G066)

MACH (7) = 4.960 ALPHA (1) = 4.960 PO = 74.986 Q(PSI) = 2 5570 RN/L = 4.1100 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

.016	2367
.018	3.1606
.020	5995
.022	.3259
.025	1705
.028	1807
.030	2155
.036	3158
.039	8354
.041	9624
.044	1 0758
.049	1 2073
.058	.8248
.068	7533
.077	6872
.085	6403
.093	.6065
.106	5028
.118	4604
.131	3794
.167	.2473
.185	.1720

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 331

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10067) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5986 SQ IN. XMRP = 0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 202 500
PHI = .000

MACH (1) = .597 ALPHA (1) = -5.040 PO = 22.010 Q(PSI) = 4.3160 RN/L = 4.9500 P = 17.295

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.016 .7893
.018 .5526
.020 .2673
.022 .3494
.025 .4520
.028 .4981
.030 .5162
.036 .5415
.039 .5384
.041 .5378
.044 .4735
.049 .4086
.058 .2648
.068 .1600
.077 .0677
.085 .0276
.093 .0006
.106 -.1415
.118 -.1591
.131 -.2358
.167 -.4321
.185 -.4677

MACH (2) = .802 ALPHA (1) = -5.040 PO = 22.014 Q(PSI) = 6.4920 RN/L = 5.9400 P = 14.409

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.016 .8926
.018 .6337
.020 .3967
.022 .4271
.025 .5220
.028 .5299
.030 .5357
.036 .5637

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 332

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G067)

MACH (2) = 802 ALPHA (1) = -5 040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.039	5798
.041	5697
.044	5309
.049	4734
.058	3322
.068	.2185
.077	.1233
.085	.0720
.093	0331
.106	- 1186
.118	- 1487
.131	- 2458
.167	- 5032
.185	- 5774

MACH (3) = .903 ALPHA (1) = -5 040 PO = 22.005 Q(PSI) = 7.4020 RN/L = 6.2600 P = 12.968

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.9420
.018	.6683
.020	.4458
.022	4987
.025	5660
.028	5762
.030	5852
.036	.6110
.039	6299
.041	.6234
.044	5827
.049	.5277
.058	.3875
.068	.2720
.077	.1772
.085	1271
.093	.0874
.106	-.0652
.118	-.1014
.131	-.2002
.167	-.4749
.185	-.5737

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 333

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G067)

MACH (4) = 1.199 ALPHA (1) = -5.040 PO = 22.001 Q(PSI) = 9.1430 RN/L = 6.6700 P = 9.0810

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.1335
.018	.8868
.020	1.1424
.022	.7296
.025	.8502
.028	.7793
.030	.7990
.036	.7965
.039	.8254
.041	.8468
.044	.8439
.049	.8106
.058	.6345
.059	.6327
.077	.5309
.085	.4033
.093	.4003
.106	.3701
.118	.2066
.131	.2031
.167	- .1062
.185	- .1096

MACH (5) = 1.452 ALPHA (1) = -5.040 PO = 21.993 Q(PSI) = 9.4730 RN/L = 6.4800 P = 6.4150

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.4405
.018	.4870
.020	.5456
.022	.6180
.025	.6407
.028	.6702
.030	.6947
.036	.7641
.039	.7837
.041	.8049
.044	.7960
.049	.7886
.058	.6731
.068	.5705
.077	.4913

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 334

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16067)

MACH (5) = 1.452 ALPHA (1) = -5.040

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.085	.4494
.093	.4316
.106	.2921
.118	.2691
.131	.1799
.167	-.0279
.185	-.1048

MACH (6) = 1.969 ALPHA (1) = -5.040 PO = 28.019 Q(PSI) = 10.196 RN/L = 7.0200 P = 3.7570

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.2958
.018	.3318
.020	.2663
.022	.3182
.025	.3173
.028	.3383
.030	.3448
.036	.4114
.039	.4889
.041	.5742
.044	.6133
.049	.6311
.058	.5951
.068	.5499
.077	.5162
.085	.4601
.093	.4482
.106	.3106
.118	.2803
.131	.2296
.167	.0364
.185	-.0185

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G067)

MACH (7) = 4.960 ALPHA (1) = -5.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.3200 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.2276
.018	.2204
.020	.2805
.022	.1917
.025	.1807
.028	.1747
.030	.2064
.036	.1913
.039	.2231
.041	.3516
.044	.6056
.048	.7205
.050	.5542
.053	.4650
.057	.4075
.085	.3622
.093	.3410
.106	.2699
.119	.2352
.131	.1898
.167	.1339
.185	.1067

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG068) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 50.1N XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 202.500
 PHI = .000

MACH (1) = .597 ALPHA (1) = -4.020 PO = 22.010 Q(PSI) = 4.3140 RN/L = 4.9500 P = 17.297

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 .8240
 .018 .5750
 .020 .3438
 .022 .3782
 .025 .4704
 .028 .4794
 .030 .4912
 .036 .5285
 .039 .5567
 .041 .5513
 .044 .5053
 .049 .4453
 .058 .3074
 .068 .1975
 .077 .1040
 .085 .0643
 .093 .0284
 .106 -.1115
 .118 -.1275
 .131 -.2113
 .167 -.4065
 .185 -.4520

MACH (2) = .803 ALPHA (1) = -4.030 PO = 22.014 Q(PSI) = 6.4990 RN/L = 5.9400 P = 14.399

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 .9017
 .018 .6571
 .020 .4063
 .022 .4646
 .025 .5336
 .028 .5423
 .030 .5481
 .036 .5882

DATE 30 OCT 75

TABULATED SOURCE DATA. MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G068)

MACH (2) = 803 ALPHA (1) = -4 030

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.039	.6198
.041	.6112
.044	.5734
.049	.5101
.058	.3676
.068	.2520
.077	.1523
.085	.1015
.093	.0649
.106	-.0926
.118	-.1246
.131	-.2195
.167	-.4848
.185	-.5604

MACH (3) = 904 ALPHA (1) = -4.020 P0 = 22.022 Q(PSI) = 7.4180 RN/L = 6.2700 P = 12.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.9418
.018	.7022
.020	.4566
.022	.5342
.025	.5829
.028	.5885
.030	.5997
.036	.6361
.039	.6672
.041	.6690
.044	.6288
.049	.5630
.058	.4229
.068	.3055
.077	.2059
.085	.1585
.093	.1209
.106	-.0374
.118	-.0714
.131	-.1716
.167	-.4495
.185	-.5492

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10068)

MACH (4) = 1.200 ALPHA (1) = -4.030 PO = 21.993 Q(PSI) = 9.1420 RN/L = 6.6700 P = 9.0660

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.1308
.018	.9003
.020	.6707
.022	.7434
.025	.7905
.028	.7990
.030	.8085
.036	.8489
.039	.8853
.041	.8889
.044	.8481
.049	.7892
.058	.6647
.068	.5549
.077	.4722
.085	.4283
.093	.3950
.106	.2551
.118	.2299
.131	.1479
.167	-.0876
.185	-.1723

MACH (5) = 1.455 ALPHA (1) = -4.070 PO = 21.997 Q(PSI) = 9.4740 RN/L = 6.4800 P = 6.3980

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.4315
.018	.4866
.020	.5689
.022	.6571
.025	.6861
.028	.7155
.030	.7417
.036	.7980
.039	.8221
.041	.8457
.044	.8348
.049	.8217
.058	.7045
.068	.5955
.077	.5154

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G068)

MACH (5) = 1.455 ALPHA (1) = -4.070

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.085	4703
.093	.4513
.106	3113
.118	2935
.131	.2014
.167	-.0039
.185	- 0880

MACH (6) = 1.966 ALPHA (1) = -4.060 PO = 28.011 Q(PSI) = 10.211 RN/L = 7.0100 P = 3.7740

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	2971
.018	3340
.020	.3020
.022	.3135
.025	.3303
.028	.3520
.030	.3566
.036	.4364
.039	5312
.041	.6308
.044	6776
.049	6869
.058	6346
.059	.5882
.077	5433
.085	4850
.093	4708
.106	.3274
.118	.2986
.131	.2474
.167	.0497
.185	-.0086

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G068)

MACH (7) = 4.960 ALPHA (1) = -4 060 PO = 75 019 Q(PS1) = 2.5580 RN/L = 4.1900 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.2699
.018	.2276
.020	.2972
.022	.2654
.025	.2004
.028	.1989
.030	.2488
.036	.2019
.039	.2291
.041	.3894
.044	.6540
.049	.7930
.058	.5935
.068	.4967
.077	.4347
.085	.4075
.093	.3637
.106	.2851
.118	.3183
.131	.1974
.167	.2034
.185	.0825

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG069) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ.IN. XMRP = .0000 IN XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN ZMRP = .0000 IN ZT
SCALE = .0091

BETA = .000 THETA = 202.500
PHI = .000

MACH (1) = .598 ALPHA (1) = -3.040 PO = 22.014 Q(PSI) = 4.3240 RN/L = 4 9500 P = 17.290

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 .8281
.018 .5921
.020 .3496
.022 .7806
.025 .4705
.028 .4829
.030 .4950
.036 .5715
.039 .6269
.041 .6051
.044 .5456
.049 .4766
.058 .3311
.068 .2177
.077 .1322
.085 .0883
.093 .0506
.106 -.0843
.118 -.1077
.131 -.1950
.167 -.3952
.185 -.4478

MACH (2) = 801 ALPHA (1) = -3.040 PO = 22.022 Q(PSI) = 6.4810 RN/L = 5.9400 P = 14.434

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 .8963
.018 .6496
.020 .4054
.022 .4574
.025 .5357
.028 .5450
.030 .5571
.036 .6348

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG069)

MACH (2) = 801 ALPHA (1) = -3.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
039	.6905
041	.6801
044	.6133
049	.5360
.058	.3922
058	.2719
077	.1776
085	.1283
093	.0899
106	-.0674
118	-.0968
131	-.1976
167	-.4635
185	-.5482

MACH (3) = 905 ALPHA (1) = -3.040 PO = 22.010 Q(PSI) = 7.4170 RN/L = 6.2700 P = 12.948

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
016	.9458
018	.7070
020	.4575
022	.5219
025	.5854
028	.5953
030	.6051
036	.6835
.039	.7414
041	.7317
044	.6694
049	.5937
058	.4468
068	.3292
077	.2326
085	.1848
093	.1470
106	-.0125
118	-.0469
131	-.1477
167	-.4303
185	-.5286

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG069)

MACH (4) = 1.200 ALPHA (1) = -3.060 PO = 22.001 Q(PSI) = 9.1450 RN/L = 6.6800 P = 9.0710

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
.016	1.1241
.018	.9189
.020	.6675
.022	.7386
.025	.7880
.028	.8003
.030	.8124
.036	.8997
.039	.9525
.041	.9405
.044	.8827
.049	.8134
.058	.6800
.068	.5739
.077	.4916
.085	.4457
.093	.4170
.106	.2764
.118	.2473
.131	.1678
.167	-.0757
.185	-.1596

MACH (5) = 1.455 ALPHA (1) = -3.060 PO = 21.997 Q(PSI) = 9.4740 RN/L = 6.4800 P = 6.3930

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
.016	.4117
.018	.4991
.020	.5947
.022	.6842
.025	.7298
.028	.7625
.030	.7850
.036	.8376
.039	.8634
.041	.8911
.044	.8817
.049	.8572
.058	.7327
.068	.6217
.077	.5367

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10069)

MACH (5) = 1.455 ALPHA (1) = -3.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

085	.4922
093	.4731
106	.3280
118	.3157
131	.2250
167	.0152
185	-.0733

MACH (6) = 1.964 ALPHA (1) = -3.060 PO = 28.007 Q(PSI) = 10.221 RN/L = 7.0200 P = 3.7870

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016	2983
018	3451
020	3551
022	2896
025	3416
028	3710
030	3703
036	.4498
039	5710
041	6867
044	.7426
049	7431
058	6739
068	6215
077	5676
.085	5090
093	4899
106	.3446
118	3173
.131	2668
167	0645
185	.0035

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG069)

MACH (7) = 4.960 ALPHA (1) = -3.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1100 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016	.2851
018	.2337
020	.2639
022	.2775
025	.2276
028	.2261
030	.2790
036	.2246
039	.2442
.041	.4060
.044	.7069
.049	.8641
.058	.6162
.068	.5209
.077	.4589
.085	.4362
.093	.3894
.105	.3062
.118	.3486
.131	.2110
.167	.2201
.185	.0779

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G070) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 202.500
 PHI = .000

MACH (1) = .597 ALPHA (1) = -2.040 PO = 22.010 Q(PSI) = 4.3200 RN/L = 4 9500 P = 17.290

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 .8229
 .018 .5971
 .020 .3302
 .022 .3421
 .025 .4573
 .028 .5093
 .030 .5366
 .036 .6857
 .039 .7144
 .041 .6636
 .044 .5756
 .049 .4959
 .058 .3567
 .068 .2478
 .077 .1537
 .085 .1134
 .093 .0803
 .106 -.0647
 .118 -.0825
 .131 -.1686
 .167 -.3786
 .185 -.4337

MACH (2) = .800 ALPHA (1) = -2.040 PO = 22.014 Q(PSI) = 6.4660 RN/L = 5 9400 P = 14.446

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 .8919
 .018 .6729
 .020 .3891
 .022 .4124
 .025 .5244
 .028 .5675
 .030 .5924
 .036 .7434

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3I)

PAGE 347

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G070)

MACH (2) = .800 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.039	.7734
.041	.7260
.044	.6378
.049	.5543
.058	.4151
.068	.2982
.077	.2035
.085	.1533
.093	.1180
.106	-.0442
.118	-.0737
.131	-.1738
.167	-.4451
.185	-.5330

MACH (3) = .904 ALPHA (1) = -2.040 PO = 22.005 Q(PSI) = 7.4100 RN/L = 6.2700 P = 12.955

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.9413
.018	.7214
.020	.4393
.022	.4820
.025	.5790
.028	.6156
.030	.6427
.036	.7936
.039	.8181
.041	.7784
.044	.6912
.049	.6094
.058	.4688
.068	.3539
.077	.2577
.085	.2093
.093	.1743
.106	.0093
.118	-.0214
.131	-.1221
.167	-.4104
.185	-.5122

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 348

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G070)

MACH (4) = 1.200 ALPHA (1) = -2.040 PO = 22.005 Q(PSI) = 9.1460 RN/L = 6.6900 P = 9.0760

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.1169
.018	.9389
.020	.6501
.022	.6977
.025	.7973
.028	.8333
.030	.8531
.036	.9834
.039	1.0145
.041	.9846
.044	.9035
.049	.8278
.050	.7031
.068	.5935
.077	.5112
.085	.4715
.093	.4383
.106	.2945
.118	.2745
.131	.1872
.167	-.0559
.185	-.1463

MACH (5) = 1.456 ALPHA (1) = -2.060 PO = 21.997 Q(PSI) = 9.4730 RN/L = 6.4800 P = 6.3800

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.3968
.018	.5259
.020	.6217
.022	.6997
.025	.7637
.028	.7988
.030	.8197
.036	.8757
.039	.9107
.041	.9401
.044	.9305
.049	.8956
.058	.7588
.068	.6436
.077	.5600

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 349

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G070)

MACH (5) = 1.456 ALPHA (1) = -2.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
.085	.5139
.093	.4973
.106	.3470
.118	.3372
.131	.2450
.167	.0323
.185	-.0583

MACH (6) = 1.963 ALPHA (1) = -2.060 PO = 28.019 Q(PSI) = 10.229 RN/L = 7.0200 P = 3.7920

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
.016	.2374
.018	.3768
.020	.4450
.022	.2564
.025	.3510
.028	.3875
.030	.3790
.036	.4100
.039	.175
.041	.1215
.044	.2550
.049	.7272
.058	.1115
.068	.6552
.077	.5890
.085	.5334
.093	.5118
.106	.3652
.118	.3363
.131	.2857
.167	.0764
.185	.0171

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 350

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G070)

MACH (7) = 4.960 ALPHA (1) = -2.060 PO = 75.028 Q(PSI) = 2 5590 RN/L = 4.0700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L	
.016	.2972
.018	.2458
.020	1 .0425
.022	.3440
.025	.2744
.028	.3350
.030	.3168
.036	.2729
.039	1 .7440
.041	.4136
.044	.7263
.049	1 .9239
.058	.6449
.068	.5373
.077	1 .3630
.085	.4619
.093	.4164
.106	.9684
.118	.5848
.131	.2305
.167	.2337
.185	.0885

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G071) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ. IN. XMRP = .0000 IN XT
LREF = 330.2000 IN YMRP = .0000 IN YT
BREF = 330 2000 IN. ZMRP = .0000 IN ZT
SCALE = 0091

PARAMETRIC DATA

BETA = 000 THETA = 202.500
PHI = .000

MACH (1) = 597 ALPHA (1) = -1.040 PO = 22.001 Q(PSI) = 4.3090 RN/L = 4.9500 P = 17.295

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 8562
.018 6546
.020 3397
.022 3057
.025 4713
.028 5504
.030 5886
.036 7462
.039 7495
.041 6647
.044 5917
.049 5146
.058 3839
.068 2683
.077 1791
.085 1370
.093 995
.105 - 0387
.118 - 0604
.131 - 1537
.167 - 3639
.185 - 4276

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MACH (2) = 798 ALPHA (1) = -1.040 PO = 22.005 Q(PSI) = 6.4500 RN/L = 5.9400 P = 14.461

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 9120
.018 7403
.020 4011
.022 3843
.025 5448
.028 6100
.030 6364
.036 7980

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G071)

MACH (2) = .798 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202 5000

X/L

039	.8129
041	.7492
044	.6570
049	.5789
058	.4436
.068	.3234
077	.2316
.085	.1819
093	.1404
106	- .0143
.118	- .0468
.131	- .1517
.167	- .4208
185	- .5171

MACH (3) = .905 ALPHA (1) = -1.040 PO = 22.010 Q(PSI) = 7.4200 RN/L = 6.2900 P = 12.943

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202 5000

X/L

016	.9525
018	.7977
020	.4489
022	.4487
025	.6080
028	.6606
030	.6837
036	.8385
039	.8520
041	.8009
.044	.7113
049	.6324
058	.4952
068	.3775
077	.2856
085	.2363
093	.1960
.106	.0374
.118	.0040
.131	-.1037
.167	-.3876
185	-.4991

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 353

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16071)

MACH (4) = 1.200 ALPHA (1) = -1.040 PO = 22.018 Q(PSI) = 9.1510 RN/L = 6.7000 P = 9.0810

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.1341
.018	1.0195
.020	.6733
.022	.7023
.025	.8407
.028	.8665
.030	.8822
.035	1.0038
.039	1.0339
.041	1.0001
.044	.9265
.049	.8509
.058	.7257
.068	.6218
.077	.5372
.085	.4924
.093	.4634
.105	.3191
.118	.2912
.131	.2103
.167	-.0423
.185	-.1276

MACH (5) = 1.457 ALPHA (1) = -1.060 PO = 22.005 Q(PSI) = 9.4760 RN/L = 6.4000 P = 6.3800

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.3829
.018	.5812
.020	.6515
.022	.6972
.025	.7919
.028	.8266
.030	.8392
.035	.9078
.039	.9629
.041	.9984
.044	.9833
.049	.9298
.058	.7809
.068	.6609
.077	.5796

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G071)

MACH (5) = 1.457 ALPHA (1) = -1.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.085	.5335
.093	.5184
.106	.3658
.118	.3568
.131	.2653
.167	.0486
.185	-.0448

MACH (6) = 1.962 ALPHA (1) = -1.060 PO = 28.015 Q(PSI) = 10.235 RN/L = 7.0300 P = 3.7990

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.2925
.018	.4723
.020	.5573
.022	.2425
.025	.3637
.028	.3926
.030	.3839
.036	.4628
.039	.6358
.041	.7922
.044	.8661
.049	.8436
.058	.7503
.068	.6773
.077	.6079
.085	.5569
.093	.5290
.106	.3847
.118	.3556
.131	.3043
.167	.0931
.185	.0300

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G071)

MACH (7) = 4.960 ALPHA (1) = -1.040 PO = 74.994 Q(PSI) = 2.5580 RN/L = 4.3200 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.2567
.018	2.3926
.020	.3365
.022	.5134
.025	.3183
.028	.3229
.030	.3172
.036	.3153
.039	.3093
.041	.3550
.044	.8233
.049	.9956
.058	.6365
.068	.5768
.077	.5118
.085	.4670
.093	.4423
.106	.3516
.118	.4186
.131	.2458
.167	.1583
.185	.1248

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G072) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 50. IN. XMRP = 0000 IN. XT
LRCF = 330 2000 IN. YMRP = 0000 IN. YT
BREF = 330.2000 IN ZMRP = .0000 IN ZT
SCALE = .0091

BETA = .000 THETA = 202.500
PHI = 000

MACH (1) = .598 ALPHA (1) = -.040 PO = 22.010 Q(PSI) = 4.3240 RN/L = 4.9600 P = 17.285

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 .9505
.018 .7157
.020 .3767
.022 .4236
.025 .4774
.028 .5286
.030 .5764
.036 .7774
.039 .7654
.041 .7047
.044 .6221
.049 .5402
.058 .4114
.068 .3050
.077 .2061
.085 .1648
.093 .1344
.106 -.0127
.118 -.0369
.131 -.1209
.167 -.3482
.185 -.4013

MACH (2) = .798 ALPHA (1) = -.040 PO = 22.005 Q(PSI) = 6.4520 RN/L = 5.9500 P = 14.459

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 .9952
.018 .8007
.020 .4380
.022 .4668
.025 .5443
.028 .6104
.030 .6604
.036 .8396

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 357

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G072)

MACH (2) = .798 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.039	.8385
.041	.7696
.044	.6782
.049	.6033
.058	.4691
.068	.3511
.077	.2609
.085	.2081
.093	.1699
.106	.0113
.118	-.0222
.131	-.1253
.167	-.4007
.185	-.4967

MACH (3) = 906 ALPHA (1) = -.040 PO = 22.014 Q(PSI) = 7.4260 RN/L * 6.3000 P = 12.938

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.0157
.018	.8563
.020	.4891
.022	.5328
.025	.6093
.028	.6651
.030	.7046
.036	.8692
.039	.8806
.041	.8171
.044	.7338
.049	.6552
.058	.5195
.068	.4056
.077	.3137
.085	.2605
.093	.2239
.106	.0648
.118	.0265
.131	-.0782
.167	-.3638
.185	-.4761

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10072)

MACH (4) = 1.198 ALPHA (1) = -0.040 PO = 21.997 Q(PS1) = 9.1370 RN/L = 6.7100 P = 9.0940

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016	1.2373
018	1.0633
020	.7148
022	.7531
025	.8160
028	.8551
030	.8900
035	1.0415
039	1.0644
041	1.0203
044	.9421
.049	.8737
.058	.7504
.069	.6420
.077	.5631
.085	.5177
.093	.4837
.106	.3436
.118	.3155
.131	.2264
.167	-.0173
.185	-.1146

MACH .51 = 1.456 ALPHA (1) = -0.040 PO = 22.005 Q(PS1) = 9.4760 RN/L = 6.4900 P = 6.3830

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016	.3874
018	.6993
.020	.6972
.022	.6691
.025	.8025
.028	.8425
.030	.8498
.035	.9392
.039	1.0323
.041	1.0727
.044	1.0331
.049	.9556
.058	.7992
.068	.5784
.077	.6017

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G072)

MACH (5) = 1.456 ALPHA (1) = -.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
.085	.5572
.093	.5400
.106	.3890
.118	.3805
.131	.2866
.167	.0645
.185	-.0309

MACH (6) = 1.960 ALPHA (1) = -.040 PO = 28.028 Q(PSI) = 10.249 RN/L = 7.0400 P = 3.8120

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
.016	.2825
.018	.6305
.020	.6894
.022	.2376
.025	.3516
.028	.3891
.030	.3776
.036	.4754
.039	.6958
.041	.8683
.044	.9306
.049	.8901
.058	.7943
.068	.6966
.077	.6313
.085	.5728
.093	.5501
.106	.4057
.118	.3806
.131	.3210
.167	.1093
.185	.0428

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G072)

MACH (7) = 4.960 ALPHA (1) = -.040 PO = 75 019 Q(PSI) = 2.5580 RN/L = 4.2000 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016	.3108
018	.2548
020	.6071
022	.3168
.025	.3395
028	.3334
030	.3712
036	.3350
039	.3289
041	.4650
044	.9896
049	1 .0652
058	.6978
068	.6177
077	.5451
085	.5254
093	.4831
106	.3803
118	.3094
131	.2684
167	.2382
185	.1112

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G073) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN XT
LREF = 330 2000 IN YMRP = .0000 IN YT
BREF = 330 2000 IN ZMRP = .0000 IN ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 202.500
PHI = .000

MACH (1) = 600 ALPHA (1) = 960 PO = 22.010 Q(PSI) = 4 3450 RN/L = 4.9700 P = 17 260

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 1.0128
.018 .7493
.020 .4465
.022 .4958
.025 .4991
.028 .5133
.030 .5351
.036 .7840
.039 .7867
.041 .7362
.044 .6513
.049 .5748
.058 .4426
.068 .3325
.077 .2426
.085 .1951
.093 .1598
.106 .0191
.118 - .0084
.131 - .0993
.167 - .3215
.185 - .3878

MACH (2) = 799 ALPHA (1) = 960 PO = 22.014 Q(PSI) = 6 4610 RN/L = 5.9300 P = 14 454

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 1.0995
.018 .8303
.020 .5018
.022 .5581
.025 .5628
.028 .5712
.030 .5917
.036 .8248

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G073)

MACH (2) = 799 ALPHA (1) = .960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.039	.8410
.041	.8015
.044	.7148
.049	.6334
.058	.5000
.068	.3840
.077	.2853
.085	.2386
.093	.2003
.106	.0382
.118	.0419
.131	- .1059
.167	-.3765
.185	-.4756

MACH (3) = 898 ALPHA (1) = .960 PO = 22 010 Q(PSI) = 7.3580 RN/L = 6.2500 P = 13 048

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1 1387
.018	8851
.020	5389
.022	6174
.025	6053
.029	6288
.030	.6599
.036	8881
.039	8875
.041	8397
.044	7604
.049	6814
.058	.5464
.068	.4298
.077	.3380
.095	.2846
.093	.2484
.106	.0892
.118	.0492
.13	- .0558
.167	- .3497
.185	-.4658

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG073)

MACH (4) = 1.199 ALPHA (1) = .960 PO = 22.005 Q(PSI) = 9.1440 RN/L = 6.6600 P = 9.0840

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.3114
.018	1.0823
.020	.7502
.022	.8136
.025	.8183
.028	.8390
.030	.8724
.036	1.0746
.039	1.0777
.041	1.0407
.044	.9667
.049	.8957
.058	.7747
.068	.6686
.077	.5851
.085	.5408
.093	.5091
.106	.3655
.118	.3475
.131	.2486
.167	.0045
.185	-.0943

MACH (5) = 1.457 ALPHA (1) = .960 PO = 21.989 Q(PSI) = 9.4690 RN/L = 6.4900 P = 6.3700

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.4468
.018	.8114
.020	.7409
.022	.6564
.025	.8050
.028	.8431
.030	.8442
.036	.9782
.039	1.0977
.041	1.1260
.044	1.0668
.049	.9742
.058	.8191
.068	.6996
.077	.6240

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G073)

MACH (5) = 1.457 ALPHA (1) = 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.085	5791
.093	.5628
.106	.4135
.118	.4023
.131	3116
.167	0800
.185	-.0105

MACH (6) = 1.958 ALPHA (1) = 960 PO = 28.011 Q(PS1) = 10.252 RN/L = 7.0300 P = 3.8190

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	3174
.018	8245
.020	.8020
.022	2405
.025	3412
.028	.3794
.030	.3717
.036	4950
.039	7537
.041	9428
.044	.9837
.049	9177
.058	8316
.058	7072
.077	6474
.085	5935
.093	.5724
.106	4247
.118	4072
.131	3397
.167	1296
.185	.0587

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 365

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G073)

MACH (7) = 4.960 ALPHA (1) = .960 PO = 75.019 Q(PS1) = 2.5580 RN/L = 4.1200 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.3123
.018	.2579
.020	1.1302
.022	.3290
.025	3062
.028	3062
.030	3486
.036	3047
.039	3274
.041	7522
.044	1 0546
.049	1.1287
.058	7205
.068	6449
.077	5784
.085	551
.093	.5073
.106	.4030
.118	4151
.131	.2981
.167	.2503
.185	.1188

ORIGINAL PAGE IS
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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 366

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G074) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ IN. XMRP = 0000 IN. XT
 LREF = 330 2000 IN. YMRP = 0000 IN. YT
 BREF = 330 2000 IN. ZMRP = 0000 IN. ZT
 SCALE = 0091

PARAMETRIC DATA

BETA = 000 THETA = 202.500°
 PHI = 000

MACH (1) = 598 ALPHA (1) = 1.960 PO = 22.014 Q(PSI) = 4.3300 RN/L = 4 9506 P = 17 282

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

016 1 0254
 .018 .7741
 .020 .4754
 .022 .5353
 .025 .5135
 .028 .4933
 .030 .5027
 .036 .8213
 .039 .8206
 .041 .7654
 .044 .6777
 .049 .6006
 .058 .4705
 .068 .3592
 .077 .2679
 .085 .2213
 .093 .1852
 .106 .0426
 .118 .0149
 .131 - .0788
 .167 - .3031
 .185 - .3768

MACH (2) = 797 ALPHA (1) = 1.960 PO = 21.993 Q(PSI) = 6.4360 RN/L = 5 9100 P = 14.469

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

016 1.1051
 .018 .8519
 .020 .5309
 .022 .5963
 .025 .5833
 .028 .5591
 .030 .5651
 .036 .8425

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 367

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G074)

MACH (2) = .797 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.039	.8659
.041	.8315
.044	.7421
.049	.6588
.058	.5285
.068	.4119
.077	.3147
.085	.2663
.093	.2249
.106	.0655
.118	.0306
.131	-.0774
.167	-.3535
.185	-.4557

MACH (3) = 907 ALPHA (1) = 1.980 PO = 22.014 Q(PSI) = 7.4350 RN/L = 6.2700 P = 12.923

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.1572
.018	.9022
.020	.5853
.022	.6495
.025	.6373
.028	.6165
.030	.6170
.036	.8723
.039	.9145
.041	.8827
.044	.7943
.049	.7160
.058	.5811
.068	.4631
.077	.3696
.085	.3201
.093	.2785
.106	.1201
.118	-.0845
.131	-.0251
.167	-.3105
.185	-.4374

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 368

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G074)

MACH (4) = 1 197 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 9.1370 RN/L = 6.6600 P = 9 1090

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.016	1 3436
.018	1 0979
.020	7917
.022	.8528
.025	8418
.028	8234
.030	8244
.036	1 0633
.039	1.0941
.041	1 0717
.044	9985
.049	9241
.058	7982
.068	.6939
.077	.6115
.085	.5632
.093	5321
.106	3903
.118	2587
.131	2682
.167	0220
.195	- 0791

MACH (5) = 1 453 ALPHA (1) = 1.980 PO = 21.937 Q(PSI) = 9.4750 RN/L = 6.4800 P = 6 4100

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.016	4898
.018	9117
.020	.7817
.022	.6368
.025	8082
.028	8568
.030	8531
.036	1 0262
.039	1 1659
.041	1 1665
.044	1 0846
.049	9838
.058	8371
.068	7212
.077	6457

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 369

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG074)

MACH (5) = 1.453 ALPHA (1) = 1.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.085	.6033
.093	.5840
.106	.4370
.118	.4197
.131	.3256
.167	.0993
.185	-.0018

MACH (6) = 1.960 ALPHA (1) = 1.960 PO = 28.011 Q(PSI) = 10.243 RN/L = 7.0200 P = 3.8090

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.3844
.018	1.0573
.020	.8869
.022	.2912
.025	.3313
.028	.3727
.030	.3614
.036	.5163
.039	.8147
.041	1.0099
.044	1.0275
.049	.9489
.058	.8491
.068	.7289
.077	.6670
.085	.6181
.093	.5967
.106	.4501
.118	.4263
.131	.3592
.167	.1481
.185	.0723

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G074)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.0700 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016	2972
018	3622
020	1 2935
022	2730
025	2745
.028	2750
030	3213
.036	2745
039	.3455
041	9533
044	1 0289
049	1 1499
058	7522
068	.6736
077	.6026
085	.5768
093	.5360
.106	4287
118	4302
131	3108
167	2548
.185	1278

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G075) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMPP = .0000 IN. XT
LREF = 330 2000 IN YMRP = 0000 IN YT
BREF = 330 2000 IN ZMRP = 0000 IN. ZT
SCALE = .0091

BETA = 000 THETA = 202.500
PHI = .000

MACH (1) = 598 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 4 3250 RN/L = 4 9500 P = 17 280

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 1.0162
.018 .7965
.020 .4977
.022 .5661
.025 .5290
.028 .4985
.030 .5186
.036 .8380
.039 .8407
.041 .7852
.044 .7010
.049 .6239
.058 .4998
.068 .3875
.077 .2988
.085 .2492
.093 .2119
.105 .0686
.118 .0414
.131 -.0557
.167 -.2804
.185 -.3679

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MACH (2) = .796 ALPHA (1) = 2.980 PO = 22.010 Q(PSI) = 6 4260 RN/L = 5.9100 P = 14 501

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016 1.0922
.018 .8731
.020 .5422
.022 .6298
.025 .6038
.028 .5833
.030 .5717
.036 .8387

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG075)

MACH (2) = .795 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.039	8821
.041	8518
.044	7676
.049	6857
.058	5549
.068	4363
.077	3435
.085	2922
.093	2514
.106	0941
.118	0566
.131	- 0539
.167	- 3291
.185	- 4413

MACH (3) = .904 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 7.4110 RN/L = 6 2700 P = 12.953

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.016	11465
.018	9257
.020	8171
.022	6743
.025	6611
.028	6391
.030	6243
.036	8562
.039	9257
.041	9021
.044	8223
.049	7422
.058	6045
.068	4911
.077	3975
.085	3439
.093	3055
.106	1454
.118	1052
.131	- 0011
.167	- 2914
.185	- 4201

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16075)

MACH (4) = 1.194 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 9.1270 RN/L = 6.6600 P = 9.1440

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.3229
.018	1.1123
.020	.8211
.022	.8709
.025	.8679
.028	.8490
.030	.8342
.036	1.0336
.039	1.0961
.041	1.0911
.044	1.0217
.049	.9453
.058	.8236
.068	.7200
.077	.6346
.085	.5871
.093	.5552
.106	.4108
.118	.3807
.131	.2886
.167	.0400
.185	-.0634

MACH (5) = 1.456 ALPHA (1) = 2.980 PO = 21.993 Q(PSI) = 9.4710 RN/L = 6.4800 P = 6.3780

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.6363
.018	1.1372
.020	.7056
.022	.6225
.025	.7919
.028	.8398
.030	.8493
.036	1.0678
.039	1.1993
.041	1.1877
.044	1.0989
.049	.9991
.058	.8589
.068	.7433
.077	.6573

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G075)

MACH (5) = 1.456 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.085	6257
.093	6045
.106	4577
.118	4440
.131	3547
.167	1172
.185	.0212

MACH (6) = 1.959 ALPHA (1) = 2.980 PO = 28.011 Q(PSI) = 10.248 RN/L = 7.0200 P = 3.8140

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.016	4947
.018	1 3150
.020	9163
.022	3308
.025	3406
.028	3677
.030	3506
.036	5435
.039	8684
.041	1 0616
.044	1 0645
.049	9233
.058	8712
.068	7524
.077	6888
.085	6433
.093	6239
.106	4700
.118	4494
.131	3765
.167	1658
.185	0963

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G075)

MACH (7) = 4.960 ALPHA (1) = 2.930 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.3100 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.2246
.018	.7130
.020	1.3373
.022	.2760
.025	.2382
.028	.2382
.030	.2458
.036	.2352
.039	.4000
.041	.9140
.044	.9866
.049	1.1226
.058	.7613
.068	.6872
.077	.6207
.085	.5753
.093	.5451
.106	.4408
.118	.4226
.131	.3198
.167	.1944
.185	.1535

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG076) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ.IN. XMRP = .0000 IN. XT
 LREF = 330 2000 IN. YMRP = 0000 IN YT
 BPEF = 330 2000 IN ZMRP = 0000 IN ZT
 SCALE = 0091

BETA = 000 THETA = 202.500
 PHI = 000

MACH (1) = 598 ALPHA (1) = 3.960 PO = 22.014 Q(PSI) = 4 3240 RN/L = 4.9500 P = 17 290

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016 1.0191
 018 8153
 020 5325
 .022 .5801
 .025 .5580
 .028 5380
 .030 5420
 .036 .8050
 039 .8496
 041 .8011
 044 7191
 .049 6454
 058 5250
 .068 4122
 077 3239
 085 2749
 093 2333
 106 0928
 118 0640
 131 - 0342
 167 - 2638
 185 - 3491

MACH (2) = 795 ALPHA (1) = 3 960 PO = 22 001 Q(PSI) = 6 4200 RN/L = 5 9100 P = 14 501

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.016 1 0953
 018 8899
 020 5962
 022 6438
 025 6396
 028 5165
 030 5934
 .036 8013

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16076)

MACH (2) = 795 ALPHA (1) = 3 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.039	.8961
.041	.8697
.044	.7905
.049	.7098
.058	.5783
.068	.4653
.077	.3739
.085	.3164
.093	.2783
.106	.1191
.118	.0787
.131	-.0269
.167	-.3104
.185	-.4178

MACH (3) = .903 ALPHA (1) = 3 960 PO = 22.018 Q(PS1) = 7.4060 RN/L = 6.2700 P = 12.975

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.1464
.018	.9448
.020	.6467
.022	.6926
.025	.6871
.028	.6712
.030	.6482
.036	.8333
.039	.9304
.041	.9237
.044	.8417
.049	.7614
.058	.6320
.068	.5141
.077	.4230
.085	.3685
.093	.3266
.106	.1669
.118	.1296
.131	.0178
.167	-.2728
.185	-.4032

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G076)

MACH (4) = 1.190 ALPHA (1) = 3.960 PO = 22 014 Q(PSI) = 9.1170 RN/L = 6.6600 P = 9 1940

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.3214
.018	1.1280
.020	.8468
.022	.8883
.025	.8909
.028	.8761
.030	.8536
.036	1.0228
.039	1.1139
.041	1.1094
.044	1.0389
.049	.9636
.058	.8451
.068	.7395
.077	.6579
.085	.6097
.093	.5745
.106	.4325
.118	.4011
.131	.3065
.157	.0541
.185	-.0514

MACH (5) = 1.452 ALPHA (1) = 3.960 PO = 21.997 Q(PSI) = 9.4750 RN/L = 6.4800 P = 6.4180

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	.7135
.018	1.2357
.020	.7918
.022	.6302
.025	.8037
.028	.8457
.030	.8723
.036	1.1079
.039	1.2240
.041	1.1977
.044	1.1116
.049	1.0114
.058	.8780
.068	.7653
.077	.6894

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G076)

MACH (5) = 1.452 ALPHA (1) = 3 960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
.085	.6465
.093	.6253
.106	.4776
.118	.4591
.131	.3672
.167	.1333
.185	.0271

MACH (6) = 1.961 ALPHA (1) = 3 960 PO = 28.007 Q(PSI) = 10.238 RN/L = 7.0200 P = 3.8040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
.016	.6468
.018	1.5775
.020	.8785
.022	.3717
.025	.3568
.028	.3641
.030	.3314
.036	.5676
.039	.8906
.041	1.0887
.044	1.1011
.049	1.0255
.058	.8874
.068	.7569
.077	.7088
.085	.6511
.093	.6383
.106	.4915
.118	.4647
.131	.3904
.167	.1856
.185	.0988

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DATE 30 OCT 75 .

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G076)

MACH (7) = 4.960 ALPHA (1) = 3.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1900 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016	.2594
018	2.2671
.020	.9563
.022	.1991
.025	.2095
.028	.2064
.030	.2669
.036	.2231
.039	.8354
.041	.8989
.044	1.0244
.049	1.1438
.058	.8197
.068	.7280
.077	.6600
.085	.6237
.093	.5844
.106	.4771
.118	.4710
.131	.3486
.167	.2730
.185	.1520

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G077) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMRP = 0000 IN. XT
LREF = 330.2000 IN. YMRP = 0000 IN. YT
BREF = 330.2000 IN. ZMRP = 0000 IN. ZT
SCALE = 0091

BETA = 000 THETA = 202.500
PHI = 000

MACH (1) = .597 ALPHA (1) = 4.980 PO = 22.014 Q(PSI) = 4.3180 RN/L = 4.9500 P = 17.297

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016 1.0242
018 .8061
.020 .5584
.022 .3719
.025 .5813
.028 .5872
.030 .5625
.036 .8002
.039 .8669
.041 .8184
.044 .7404
049 .6664
.058 .5464
.068 .4384
.077 .3515
.085 .2995
.093 .2597
106 .1150
118 .0847
131 - .0100
167 - .2480
185 - .3344

MACH (2) = .793 ALPHA (1) = 4.980 PO = 22.001 Q(PSI) = 6.4010 RN/L = 5.9100 P = 14.529

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

016 1.1011
018 .9060
020 .6235
022 .6447
.025 .6557
.028 .6507
.030 .6132
036 .8198

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16077)

MACH (2) = .793 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202 5000

X/L	
.039	.9288
.041	.8940
.044	.8090
.049	.7279
.058	.6084
.068	.4922
.077	.309
.085	.3487
.093	.3032
.106	.1469
.118	.1102
.131	-.0050
.167	-.2804
.185	-.3999

MACH (3) = 898 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 7 3620 RN/L = 6.2600 P = 13.035

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L	
.016	1.1515
.018	.9603
.020	.6710
.022	.6949
.025	.7115
.028	.6983
.030	.6577
.036	.8244
.039	.9689
.041	.9464
.044	.8606
.049	.7787
.058	.6514
.068	.5388
.077	.4488
.085	.3921
.093	.3509
.106	.1909
.118	.1513
.131	.0417
.167	-.2568
.185	-.3829

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G077)

MACH (4) = 1.187 ALPHA (1) = 4.980 PO = 22.001 Q(PSI) = 9.1000 RN/L = 6.6700 P = 9.2290

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.3236
.018	1.1458
.020	.8707
.022	.8883
.025	.9115
.028	.9138
.030	.8692
.036	1.0331
.039	1.1533
.041	1.1294
.044	1.0569
.049	.9808
.058	.8654
.068	.7644
.077	.6841
.085	.6321
.093	.5994
.106	.4559
.118	.4225
.131	.3286
.167	.0718
.185	-.0344

MACH (5) = 1.459 ALPHA (1) = 4.980 PO = 21.989 Q(PSI) = 9.4680 RN/L = 6.4700 P = 6.3550

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	1.0329
.018	1.3922
.020	.7924
.022	.6996
.025	.8193
.028	.8427
.030	.8626
.036	1.0849
.039	1.2158
.041	1.2102
.044	1.1339
.049	1.0360
.058	.9030
.068	.7903
.077	.7160

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16077)

MACH (5) = 1 459 ALPHA (1) = 4 980

SECTION (1)EXTERNAL TANK NOSE .DEPENDENT VARIABLE CP

THETA 202 5000

X/L

085	6694
093	6494
106	5002
118	4836
.131	.3990
.167	.1478
.185	.0551

MACH (6) = 1 956 ALPHA (1) = 4 960 PO = 28.015 Q(PSI) = 10.265 RN/L = 7 0400 P = 3.8320

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 202 5000

X/L

.016	.8766
018	1.7629
020	.8736
022	.4298
025	.4225
028	.4069
030	.3522
.036	.5718
039	.8751
041	1 1130
044	1 1548
049	1 0700
058	.9305
068	.7988
.077	.7375
085	.6918
.093	.6687
.106	.5132
.118	.5017
.131	.4180
.167	.1998
.185	.1186

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G077)

MACH (7) = 4.960 ALPHA (1) = 4.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1100 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 202.5000

X/L

.016	2518
.018	3.2573
.020	.6827
.022	1807
.025	1823
.028	1883
.030	2367
.036	3062
.039	.9095
.041	9941
.044	1.0863
.049	1.2239
.058	8550
.068	7613
.077	.6887
.085	6509
.093	.6146
.106	5043
.118	4846
.131	3743
.167	2760
.185	1641

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G078) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ.IN. XMRP = .0000 IN. XT
 LREF = 330 2000 IN. YMRP = 0000 IN. YT
 BREF = 330 2000 IN. ZMRP = 0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = 225 000
 PHI = .000

MACH (1) = .594 ALPHA (1) = -5.040 PO = 22.001 Q(PSI) = 4.2840 RN/L = 5.0700 P = 17.325

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	8875
.018	.6099
.020	.3140
.022	.4372
.025	.4427
.028	.4705
.030	.4699
.036	.5111
.039	.5031
.041	.5449
.044	.4850
.049	.4244
.058	.2837
.068	.1772
.077	.0869
.085	.0459
.093	.0107
.106	- .1301
.118	- .1501
.131	- .2312
.157	-.4321
.185	- .4679

MACH (2) = .798 ALPHA (1) = -5.040 PO = 22.010 Q(PSI) = 6.4510 RN/L = 6.1400 P = 14.464

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	9718
.018	6913
.020	4010
.022	.5172
.025	.5277
.028	.5275
.030	.5227
.036	.5481

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 387

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G078)

MACH (2) = .798 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.039	.5725
.041	.5893
.044	.5409
.049	.4988
.058	.3465
.068	.2273
.077	.1384
.085	.0911
.093	.0498
.106	-.1013
.118	-.1318
.131	-.2325
.167	-.4970
.185	-.5659

MACH (3) = .905 ALPHA (1) = -5.020 PO = 22.001 Q(PSI) = 7.4140 RN/L = 6.2900 P = 12.943

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	1.0241
.018	.7433
.020	.4575
.022	.5732
.025	.5856
.028	.5808
.030	.5766
.036	.6023
.039	.6226
.041	.6439
.044	.6008
.049	.5531
.058	.4030
.068	.2875
.077	.1927
.085	.1475
.093	.1114
.106	-.0491
.118	-.0798
.131	-.1767
.167	-.4600
.185	-.5504

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG078)

MACH (4) = 1.197 ALPHA (1) = -5.040 PO = 22.010 Q(PSI) = 9.1390 RN/L = 6.6700 P = 9.1090

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	1.2091
018	9543
.020	6794
022	7899
025	7908
028	7920
030	7863
036	8116
039	8395
041	8558
044	8226
049	7827
.058	6432
.068	5371
.077	.4597
.085	4162
.093	.3865
106	.2472
.118	.2193
.131	1416
167	- 0998
.185	- 1750

MACH (5) = 1.455 ALPHA (1) = -5.040 PO = 22.001 Q(PSI) = 9.4750 RN/L = 6.4900 P = 6.3900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	4066
018	.4795
.020	5507
022	6053
025	6236
028	6572
.030	6829
036	8111
039	8347
041	.8780
044	.8507
.049	8380
058	5911
.068	5783
077	5005

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G078)

MACH (5) = 1.455 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.085	.4621
.093	.4476
.106	.2996
.118	.2943
.131	.2010
.167	-.0023
.185	-.0852

MACH (6) = 1.963 ALPHA (1) = -5.040 PO = 28.011 Q(PSI) = 10.225 RN/L = 7.0600 P = 3.7890

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.2529
.018	.3434
.020	.3891
.022	.2520
.025	.3255
.028	.3509
.030	.3488
.036	.4324
.039	.5623
.041	.6786
.044	.7135
.049	.7028
.058	.6320
.068	.5850
.077	.5289
.085	.4876
.093	.4501
.106	.3324
.118	.3181
.131	.2412
.167	.0451
.185	.0032

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16078)

MACH (7) = 4.960 ALPHA (1) = -5.040 PC = 75 028 Q(PSI) = 2.5590 RN/L = 4.3000 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.2231
.018	.2276
.020	.2926
.022	.1792
.025	.1671
.028	.1671
.030	.1898
.035	.2139
.039	.3425
.041	.7991
.044	.9061
.049	.8142
.058	.5270
.068	.4693
.077	.4226
.085	.3788
.093	.3530
.106	.2820
.118	.3198
.131	.1943
.167	.1354
.185	.1036

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G079) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ IN. XMRP = .0000 IN. XT.
LREF = 330 2000 IN. YMRP = 0000 IN. YT
BREF = 330 2000 IN. ZMRP = 0000 IN. ZT
SCALE = 0091

PARAMETRIC DATA

BETA = .000 THETA = 225.000
PHI = 000

MACH (1) = 595 ALPHA (1) = -4.040 PO = 22.005 Q(PSI) = 4.2880 RN/L = 5.0600 P * 17.325

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016 .9056
018 .6473
.020 .3433
.022 .4632
025 .4971
.028 .5131
030 .4862
036 .5169
.039 .5240
041 .5439
.044 .4944
.049 .4499
.058 .3076
.068 .1999
.077 .1093
085 .0721
093 .0386
.106 - .1047
118 - .1271
131 - .2108
.167 - .4167
.185 - .4567

MACH (2) = 799 ALPHA (1) = -4.040 PO = 22.001 Q(PSI) = 6.4610 RN/L = 6.1400 P = 14.441

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016 .9937
018 .7231
.020 .4172
022 .5407
025 .5476
028 .5437
030 .5440
036 .5733

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16079)

MACH (2) = 799 ALPHA (1) = -4 040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

039	.6079
041	.6223
044	.5811
049	.5239
058	.3795
068	.2597
077	.1648
085	.1182
093	.0777
106	-.0791
119	-.1096
131	-.2077
167	-.4779
185	-.5489

MACH (3) = 903 ALPHA (1) = -4 040 PO = 22.005 Q(PSI) = 7.4020 RN/L = 6.2900 P = 12.968

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	.10350
018	.7783
020	.4754
022	.5958
.025	.5964
.028	.5962
030	.5902
035	.6189
039	.6559
041	.6665
044	.6303
049	.5811
058	.4297
.068	.3099
077	.2186
085	.1678
093	.1289
.106	-.0240
.112	-.0632
.131	-.1612
.167	-.4458
.185	-.5390

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G079)

MACH (4) = 1.198 ALPHA (1) = -4.020 PO = 22.001 Q(PSI) = 9.1380 RN/L = 6 6800 P = 9 0960

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	1.2180
.018	.9853
.020	.6930
.022	.8035
.025	.8064
.028	.8052
.030	.8031
.036	.8335
.039	.8699
.041	.8859
.044	.8547
.049	.8069
.058	.6728
.068	.5645
.077	.4843
.085	.4410
.093	.4074
.106	.2684
.118	.2410
.131	.1596
.167	-.0812
.185	-.1622

MACH (5) = 1.463 ALPHA (1) = -4.070 PO = 22.001 Q(PSI) = 9.4710 RN/L = 6 4700 P = 6.3200

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.4155
.018	.4898
.020	.5690
.022	.6437
.025	.6650
.028	.7005
.030	.7242
.036	.8333
.039	.8603
.041	.8982
.044	.8815
.049	.8611
.058	.7149
.068	.6021
.077	.5220

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10079)

MACH (5) = 1.463 ALPHA (1) = -4.070

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.085	.4805
.093	.4629
.106	.3153
.118	.2975
.131	.2326
.167	.0051
.185	-.0626

MACH (6) = 1.963 ALPHA (1) = -4.080 PO = 28.011 Q(PSI) = 10.229 RN/L = 7.0500 P = 3.7940

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.2636
.018	.3545
.020	.4259
.022	.2425
.025	.3280
.028	.3606
.030	.3611
.036	.4538
.039	.5924
.041	.7108
.044	.7521
.049	.7381
.058	.6630
.068	.6097
.077	.5498
.085	.5113
.093	.4719
.106	.3501
.118	.3364
.131	.2555
.167	.0588
.185	.0123

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG079)

MACH (7) = 4 960 ALPHA (1) = -4 060 PO = 75 019 Q(PSI) = 2 5580 RN/L = 4.1800 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	2594
.018	.2305
020	2760
022	.2352
025	1989
.028	1928
.030	2442
.036	2064
.039	.2790
041	.6797
044	.9457
049	.9246
058	5708
068	4967
077	4378
.085	.4226
.093	.3879
.106	.2972
.118	.3168
.131	2049
.167	1944
.195	.0825

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10080) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN XT
 LREF = 330.2000 IN YMRP = .0000 IN YT
 BREF = 330.2000 IN ZMRP = .0000 IN ZT
 SCALE = .0091

BETA = .000 THETA = 225.000
 PHI = .000

MACH (1) = 595 ALPHA (1) = -3.060 PO = 21.997 Q(PSI) = 4.2870 RN/L = 5.0600 P = 17.317

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016 8988
 018 6832
 020 3692
 022 4699
 .025 4964
 .028 4872
 .030 4822
 .036 5434
 039 5890
 041 5941
 044 5452
 049 4818
 058 3425
 068 2296
 .077 1386
 .085 0981
 093 0614
 106 - 0748
 118 - 1065
 131 - 1926
 167 - 3986
 .195 - 4485

MACH (2) = 800 ALPHA (1) = -3.060 PO = 22.010 Q(PSI) = 6.4630 RN/L = 6.1500 P = 14.446

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016 9867
 018 7541
 020 4276
 022 5420
 025 5564
 028 5473
 030 5441
 036 6074

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 397

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10080)

MACH (2) = 800 ALPHA (1) = -3.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.039	.6514
.041	.6620
.044	.6163
.049	.5497
.058	.4060
.069	.2851
.077	.1907
.085	.1422
.093	.1012
.106	-.0538
.118	-.0874
.131	-.1869
.167	-.4558
.185	-.5343

MACH (3) = .904 ALPHA (1) = -3.040 PO = 21.997 Q(PSI) = 7.4060 RN/L = 6.2900 P = 12.953

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.10271
.018	.8097
.020	.4782
.022	.5918
.025	.6086
.028	.6014
.030	.5979
.036	.6582
.039	.6996
.041	.7124
.044	.6713
.049	.6056
.058	.4610
.069	.3418
.077	.2458
.085	.1965
.093	.1565
.106	-.0015
.118	-.0371
.131	-.1363
.167	-.4229
.185	-.5190

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G080)

MACH (4) = 1 199 ALPHA (1) = -3 040 PO = 22 005 Q(PSI) = 9.1440 RN/L = 6 6800 P = 9.0840

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	1 2110
.018	1.0082
.020	.6880
.022	7945
.025	8062
.028	8041
.030	8043
.036	8689
.039	9173
.041	9270
.044	8846
.049	8286
.058	.6964
.060	.5830
.07	5050
.085	.4612
.093	.4241
.106	2898
.118	2539
.131	1738
.167	- 0658
.185	- 1553

MACH (5) = 1 465 ALPHA (1) = -3.060 PO = 22.001 Q(PSI) = 9.4700 RN/L = 6.4700 P = 6 3050

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	4119
.018	5018
.020	5899
.022	6759
.025	.7067
.028	7443
.030	7675
.036	8575
.039	8889
.041	9276
.044	9118
.049	8972
.058	.7381
.069	6250
.077	5442

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG080)

MACH (5) = 1 465 ALPHA (1) = -3 060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.085	5009
.093	4836
.106	.3343
.118	3147
.131	.2511
.167	.0182
.185	-.0504

MACH (6) = 1 957 ALPHA (1) = -3 060 PO = 28.011 Q(PSI) = 10.257 RN/L = 7.0700 P = 3.8240

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	.2734
.018	.3781
.020	4634
.022	2376
.025	3344
.028	3723
.030	3695
.036	4711
.039	6220
.041	7452
.044	7947
.049	7807
.058	6977
.068	.6387
.077	.5737
.085	5270
.093	4941
.106	3689
.118	3477
.131	2726
.167	0666
.185	0228

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 400

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G080)

MACH (7) = 4.960 ALPHA (1) = -3 060 PO = 75 019 Q(PSI) = 2 5580 RN/L = 4 1000 P = .14900

SECTION (1) EXTERNAL TANK NOSE.

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	.2775
018	.2412
020	.2654
022	.2654
.025	.2337
028	.2291
030	.2790
.036	.2321
039	.2654
041	.5708
044	.9352
049	.9548
058	.6101
.068	.5330
.077	.4725
.085	.4499
.093	.4105
.106	.3183
.118	.3410
.131	.2201
.167	.2080
185	.0795

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 401

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10081) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN YMRP = .0000 IN YT
BREF = 330.2000 IN. ZMRP = .0000 IN ZT
SCALE = .0091

BETA = .000 THETA = 225.000
PHI = .000

MACH (1) = .594 ALPHA (1) = -2.040 PO = 22.005 Q(PSI) = 4.2860 RN/L = 5.0600 P = 17.327

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016 .8749
.018 .6849
.020 .3533
.022 .3824
.025 .4535
.028 .4676
.030 .5003
.036 .6351
.039 .6781
.041 .6496
.044 .5727
.049 .5009
.058 .3610
.068 .2466
.077 .1617
.085 .1159
.093 .0813
.106 -.0558
.118 -.0894
.131 -.1751
.167 -.3870
.185 -.4389

MACH (2) = .798 ALPHA (1) = -2.040 PO = 22.005 Q(PSI) = 6.4500 RN/L = 6.1500 P = 14.461

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016 .9686
.018 .7435
.020 .4076
.022 .4570
.025 .5191
.028 .5311
.030 .5658
.036 .7058

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 402

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G081)

MACH (2) = .798 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.039	7554
.041	7234
.044	6434
.049	5689
.058	4291
.068	3037
.077	2140
.085	1647
.093	1231
.106	- 0305
.118	-.0648
.131	-.1685
.167	-.4364
.185	- 5237

MACH (3) = .906 ALPHA (1) = -2.020 PO = 22.005 Q(PSI) = 7.4270 RN/L = 6.3100 P = 12.925

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	1 0077
.018	7888
.020	.4590
.022	4976
.025	5809
.028	5883
.030	6160
.036	.7505
.039	8009
.041	7754
.044	7036
.049	6253
.058	4901
.068	3613
.077	2693
.085	.2165
.093	1808
.106	0222
.118	- 0162
.131	-.1157
.167	-.4043
.185	- 5064

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 403

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G081)

MACH (4) = 1.206 ALPHA (1) = -2.040 PO = 22.005 Q(PSI) = 9.1680 RN/L = 6.6900 P = 8.9990

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	1.1837
018	.9843
020	.6708
022	.6982
.025	.7854
.028	.8003
.030	.8278
036	.9554
039	1.0072
041	.9830
044	.9153
049	.8451
.058	.7143
.068	.6039
.077	.5243
.085	.4811
093	.4486
106	.3078
.118	.2804
.131	.1959
.167	-.0493
.185	-.1366

MACH (5) = 1.465 ALPHA (1) = -2.060 PO = 21.993 Q(PSI) = 9.4660 RN/L = 6.4700 P = 6.2980

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	.4125
018	.5323
020	.6140
022	.7000
025	.7463
028	.7859
030	.8056
036	.8866
039	.9285
041	.9633
044	.9491
049	.9117
.058	.7615
068	.6449
077	.5638

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 404

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G081)

MACH (5) = 1.465 ALPHA (1) = -2.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.085	5212
.093	5027
.106	3494
.118	3336
.131	2651
.167	0341
.185	- 0394

MACH (6) = 1.959 ALPHA (1) = -2.060 PO = 28.024 Q(PS1) = 10.255 RN/L = 7.0700 P = 3.8190

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	.2823
.018	.4097
.020	.5208
.022	.2405
.025	.3459
.028	.3870
.030	.3788
.036	.4705
.039	.6418
.041	.7770
.044	.8362
.049	.8193
.058	.7302
.068	.6607
.077	.5928
.085	.5474
.093	.5097
.106	.3892
.118	.3633
.131	.2852
.167	.0794
.185	.0307

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 405

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G081)

MACH (7) = 4.960 ALPHA (1) = -2 040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4 0600 P = .14900

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	.2926
.018	2.7584
.020	.6116
.022	.3622
.025	.2775
.028	.3032
.030	.3183
.036	2790
.039	9926
.041	4544
.044	9064
.049	1 5898
.058	6434
.068	5663
.077	1.0758
.085	4740
.093	4347
.106	8233
.118	3561
.131	2367
.167	.2155
.185	.0870

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 406

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G082) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN YMRP = .0000 IN YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 225.000
PHI = 000

MACH (1) = .594 ALPHA (1) = -1 040 PO = 22.005 Q(PSI) = 4.2820 RN/L = 5 0600 P = 17.332

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 8605
018 6562
020 3390
022 3114
025 4483
028 5202
030 5764
.036 7424
039 7448
041 6756
.044 5872
049 5120
058 3833
068 2670
.077 1759
085 1380
093 0983
106 -.0406
118 -.0676
131 - 1596
167 - 3689
.185 - 4311

MACH (2) = .798 ALPHA (1) = -1 040 PO = 22.010 Q(PSI) = 6.4530 RN/L = 6 1600 P = 14 461

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016 .9351
018 .7265
020 .4004
022 3919
025 5226
028 .5935
030 6369
036 .8070

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 407

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G082)

MACH (2) = 798 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

039	8201
041	7495
044	6576
049	5839
058	.4448
068	3252
077	2356
085	1831
093	1452
106	- 0089
118	- 0448
131	- 1481
167	-.4208
185	-.5111

MACH (3) = .904 ALPHA (1) = -1.040 PO = 22.005 Q(PSI) = 7.4100 RN/L = 6.3000 P = 12.955

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.9763
018	.7622
020	4505
022	4498
025	5908
028	6411
030	6790
036	8422
039	8646
041	8065
044	7139
049	6359
058	4998
068	3770
077	2861
085	2386
093	1992
106	0386
118	.0046
131	-.0991
167	-.3902
185	- 4938

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G082)

MACH (4) = 1 204 ALPHA (1) = -1.040 PO = 22 001 Q(PSI) = 9.1590 RN/L = 6.6900 P = 9.0240

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	1.1481
.018	1.0019
.020	.6725
.022	.7008
.025	.8185
.028	.8562
.030	.8749
.036	1.0153
.039	1.0455
.041	1.0071
.044	.9274
.049	.8562
.058	.7292
.068	.6188
.077	.5412
.085	.4947
.093	.4650
.106	.3249
.118	.2954
.131	.2104
.167	- .0386
.185	- .1294

 $\frac{d^2}{dx^2}$

MACH (5) = 1 465 ALPHA (1) = -1.060 PO = 21.985 Q(PSI) = 9 4620 RN/L = 6.4700 P = 6 3000

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	4187
.018	5796
.020	.6376
.022	7037
.025	7741
.028	8130
.030	8306
.036	9086
.039	9678
.041	1 0053
.044	9846
.049	9356
.058	.7811
.068	.6609
.077	5800

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10082)

MACH (5) = 1.465 ALPHA '(1) = -1.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.085	5385
.093	5195
.106	3647
.118	3508
.131	2813
.167	0448
.185	- 0271

MACH (6) = 1.957 ALPHA (1) = -1.060 PO = 28.028 Q(PSI) = 10.266 RN/L = 7.0800 P = 3.8290

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.2884
.018	.4890
.020	.5962
.022	.2411
.025	.3664
.028	.4005
.030	3886
.036	4738
.039	6531
.041	8090
.044	8810
.049	8604
.058	7729
.068	6859
.077	6150
.085	5649
.093	5322
.106	4047
.118	3796
.131	3057
.167	0922
.185	0432

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (T43F)

PAGE 410

MSFC TWT 609 (T43F) ET NOSE WITH NOSE CAP

(R1G082)

MACH (7) = 4 960 ALPHA (1) = -1 040 PO = 75 028 Q(PST) = 2 5590 RN/L = 4.2800 P = 14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	.2533
.018	.2504
020	.3923
.022	.3033
.025	.3153
028	.3137
030	.3123
036	.3123
039	.3106
.041	.3788
.044	.9291
049	1 0089
058	.6358
068	.5768
.077	.5101
085	.4650
093	.4483
106	.3484
.118	.3879
131	.2579
157	.1520
185	.1203

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 411

MSFC TWT 609 (TA3F) ET NOSE WITH JSE CAP

(R16083) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN XMRP = 0000 IN XT
LREF = 370 2000 IN YMRP = 0000 IN YT
BREF = 330.2000 IN. ZMRP = 0000 IN. ZT
SCALE = .7091

BETA = .000 THETA = 225.000
PHI = .000

MACH (1) = 596 ALPHA (1) = - .040 PO = 22.014 Q(PSI) = 4.3010 RN/L = 5.0800 P = 17.317

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016 8625
018 .7187
020 3503
022 4003
025 .4647
.028 .5642
.030 6154
036 .7917
.039 .7637
.041 .6882
044 .6025
049 5274
058 4016
068 .2917
077 .2003
.085 1580
093 1242
.106 -.0180
118 -.0476
131 -.1378
157 - 3540
185 - 4162

MACH (2) = 799 ALPHA (1) = -.040 PO = 22.014 Q(PSI) = 6.4600 RN/L = 6.1700 P = 14.456

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016 .9554
018 .8034
020 .4177
.022 .4868
025 .5502
028 .6233
.030 .6717
036 8346

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G083)

MACH (2) = .799 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA P25 0000

X/L

.039	8283
.041	7609
.044	6738
.049	5976
.058	.4663
.068	.3456
.077	.2557
.085	.2035
.093	1680
.106	.0112
.118	-.0257
.131	-.1289
.167	-.4052
.185	-.4979

MACH (3) = .904 ALPHA (1) = -.040 PO = 22.010 Q(PS1) = 7.4160 RN/L = 6.3200 P = 12.950

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	.9342
.018	8308
.020	7177
.022	5135
.025	3132
.029	1706
.030	.7046
.036	.8635
.039	8739
.041	8154
.044	7278
.049	.6524
.058	5206
.068	3978
.077	3082
.085	2582
.093	2182
.106	0622
.118	0240
.131	-.0819
.167	- 3664
.185	- 4803

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16083)

MACH (4) = 1.204 ALPHA (1) = - 040 PO = 22.010 Q(PSI) = 9.1630 RN/L = 6 7100 P = 9.0240

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016 1.1881
.018 1.0562
.020 .7003
.022 .7258
.025 .8231
.028 .8628
.030 .8919
.036 1.0423
.039 1.0664
.041 1.0206
.044 .9426
.049 .8734
.058 .7489
.068 .6390
.077 .5609
.085 .5156
.093 .4840
.106 .3439
.118 .3140
.131 .2273
.167 -.0222
.185 -.1146

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MACH (5) = 1.466 ALPHA (1) = - 040 PO = 21.993 Q(PSI) = 9.4650 RN/L = 6.4800 P = 6.2950

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016 .4250
.018 .6585
.020 .6704
.022 .6744
.025 .7872
.028 .8277
.030 .8359
.036 .9278
.039 1.0151
.041 1.0579
.044 1.0275
.049 .9575
.058 .7979
.068 .6756
.077 .5973

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 414

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10083)

MACH (5) = 1.466 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

085	.5554
.093	.5383
106	.3833
118	.3681
131	.2973
167	.0594
185	-.0165

MACH (6) = 1.952 ALPHA (1) = -.040 PO = 28.011 Q(PSI) = 10.284 RN/L = 7.0900 P = 3.8540

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	.2939
018	.5800
020	.6899
022	.2310
025	.3708
028	.3983
030	.3887
.036	.4796
.039	.6851
.041	.8601
044	.9307
049	.8918
058	.8180
068	.6995
077	.6279
085	.5793
093	.5542
.106	.4209
.118	.3966
131	.3226
167	.1059
185	.0549

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 415

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG083)

MACH (7) = 4.960 ALPHA (1) = - 040 PO = 75.036 Q(PSI) = 2 5590 RN/L = 4.1700 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.2925
.018	.2518
.020	.5950
.022	.3486
.025	.3333
.028	.3319
.030	.3620
.036	.3303
.039	.3229
.041	.4391
.044	.9515
.049	1.0485
.058	.6794
.068	.6084
.077	.5330
.085	.5101
.093	.4693
.106	.3667
.118	.3923
.131	.2713
.167	.2305
.185	.1081

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 416

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G084) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN XT
LREF = 330.2000 IN. YMRP = 0000 IN YT
BREF = 330 2000 IN. ZMRP = 0000 IN ZT
SCALE = 0091

BETA = 000 THETA = 225 000
PHI = 000

MACH (1) = 603 ALPHA (1) = .960 PO = 22 010 Q(PS1) = 4.3840 RN/L = 5 1400 P = 17.212

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 9838
018 7464
.020 4030
022 .4962
.025 .4659
.028 5070
.030 5705
.036 7967
039 7680
041 7109
044 6238
049 5529
058 4239
068 3089
077 2204
.085 1731
.093 1368
.106 - 0034
.118 - 0317
131 -.1260
.167 - 3425
.185 -.4127

MACH (2) = 796 ALPHA (1) = .960 PO = 22.010 Q(PS1) = 6.4240 RN/L = 5.9600 P = 14.504

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016 1 0381
.018 8268
020 4598
022 5561
025 .5368
.028 5833
030 6391
036 8539

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 417

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G084)

MACH (2) = .796 ALPHA (1) = 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.039	8291
.041	.7725
.044	6899
.049	6158
.058	4858
.068	.3643
.077	.2737
.085	2213
.093	1853
.106	0279
.118	- 0094
.131	-.1148
.167	-.3862
.185	-.4874

MACH (3) = .900 ALPHA (1) = .960 PO = 22.005 Q(PSI) = 7.3810 RN/L = 6.2700 P = 13.003

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	1 0802
.018	8699
.020	5043
.022	.5999
.025	5868
.028	6280
.030	.6806
.036	.8933
.039	8713
.041	8295
.044	7408
.049	6659
.058	5420
.068	4134
.077	3216
.085	2800
.093	.2347
.106	.0746
.118	0663
.131	- 0701
.167	- 3454
.185	- 4784

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16084)

MACH (4) = 1.195 ALPHA (1) = .960 P0 = 22.010 Q(PSI) = 9.1320 RN/L = 6.6800 P = 9.1340

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	1.2832
.018	1.0767
.020	.7322
.022	.7969
.025	.8096
.028	.8363
.030	.8744
.036	1.0642
.039	1.0654
.041	1.0291
.044	.9554
.049	.8888
.058	.7664
.068	.6575
.077	.5755
.085	.5313
.093	.5008
.106	.3587
.118	.3275
.131	.2394
.167	-.0045
.185	-.1036

MACH (5) = 1.463 ALPHA (1) = .960 P0 = 21.997 Q(PSI) = 9.4690 RN/L = 6.4800 P = 6.3200

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.4400
.018	.7621
.020	.7120
.022	.6470
.025	.7896
.028	.8268
.030	.8422
.036	.9585
.039	1.0755
.041	1.1128
.044	1.0591
.049	.9698
.058	.8115
.068	.6936
.077	.6124

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G084)

MACH (5) = 1.463 ALPHA (1) = 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

085	.5723
093	.5578
106	4000
118	3964
131	3121
157	0796
185	- 0030

MACH (6) = 1.953 ALPHA (1) = 960 PO = 28 015 Q(PS1) = 10.285 RN/L = 7 0900 P = 3.8540

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	.3116
.018	.7554
.020	.7821
.022	2351
.025	3577
.028	.3914
.030	.3842
.036	.4987
.039	7442
.041	.9282
.044	9758
.049	9183
.058	8511
.069	7087
.077	6475
.085	5973
.093	5706
.105	4369
.118	4187
.131	3381
.157	1221
.185	0865

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 420

MSFC TWT 609 (TA3F) ET NOSE WITH NCSE CAP

(R16084)

MACH (7) = 4.960 ALPHA (1) = .960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1000 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	3017
.018	2503
.020	9911
.022	3229
.025	3123
.028	3093
.030	3470
.036	3077
.039	3138
.041	6298
.044	1.0380
.049	1.1030
.058	6948
.068	.6313
.077	5617
.085	5315
.093	4922
.106	.3879
.118	.4257
.131	.2881
.167	2412
.185	.1127

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 421

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G085) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ. IN XMRP = 0000 IN. XT
LREF = 330 2000 IN YMRP = 0000 IN YT
BREF = 330 2000 IN ZMRP = 0000 IN ZT
SCALE = 0091

BETA = .000 THETA = 225.000
PHI = 000

MACH (1) = 603 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 4.3780 RN/L = 5.1400 P = 17.215

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 1.0214
018 .7632
020 .4513
022 .5301
025 .5060
028 .4954
030 .5103
.036 .7489
.039 .7612
041 .7287
044 .6508
049 .5776
058 .4502
068 .3321
077 .2473
085 .1946
093 .1590
106 .0203
118 - .0140
.131 - .1049
167 - .3270
185 - .3990

MACH (2) = 796 ALPHA (1) = 1.960 PO = 21.997 Q(PSI) = 6.4230 RN/L = 5.9600 P = 14.491

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 1.1045
018 .8425
020 .5125
022 .5939
025 .5762
028 .5630
030 .5731
036 .7850

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 422

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G085)

MACH (2) = .796 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.039	8205
.041	7963
.044	7188
.049	6430
.058	.5110
.068	3902
.077	2990
.085	2450
.093	2066
.106	0506
.118	.0110
.131	-.0949
.167	-.3677
.185	-.4729

MACH (3) = 896 ALPHA (1) = 1.960 PO = 22.014 Q(PSI) = 7.3470 RN/L = 6.2700 P = 13.070

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	1.1540
.018	.8879
.020	.5552
.022	.6386
.025	.6194
.028	6094
.030	6267
.036	8524
.039	8587
.041	8398
.044	7649
.049	6899
.058	5572
.068	.4343
.077	3459
.085	2925
.093	2540
.106	0966
.118	0562
.131	- 0532
.167	-.3363
.185	- 4687

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 423

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G085)

MACH (4) = 1.193 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 9.1220 RN/L = 6.6700 P = 9.1610

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	1.3287
.018	1.0835
.020	.7763
.022	.8439
.025	.8404
.029	.8272
.030	.8224
.035	.9951
.039	1.0496
.041	1.0450
.044	.9802
.049	.9112
.058	.7872
.068	.6764
.077	.5955
.085	.5489
.093	.5163
.106	.3757
.118	.3419
.131	.2523
.167	.0091
.185	-.0955

MACH (5) = 1.462 ALPHA (1) = 1.960 PO = 21.997 Q(PSI) = 9.4700 RN/L = 6.4700 P = 6.3300

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	.5119
.018	.8560
.020	.7475
.022	.6319
.025	.7777
.028	.8206
.030	.8271
.035	.9951
.039	1.1302
.041	1.1428
.044	1.0727
.049	.9742
.058	.8251
.068	.7071
.077	.6286

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 424

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G085)

MACH (5) = 1.462 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

085	.5891
093	.5718
105	.4190
.118	.4053
131	.3242
167	.0880
185	.0052

MACH (6) = 1.951 ALPHA (1) = 1.960 PO = 28.015 Q(PSI) = 10.294 RN/L = 7.0800 P = 3.8640

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	.3520
018	.9226
020	.8569
022	.2616
.025	.3489
028	.3870
030	.3746
.036	.5268
039	.7993
041	.9807
044	1.0108
049	.9425
058	.8599
068	.7290
077	.6595
085	.6150
093	.5865
.106	.4551
118	.4314
.131	.3519
167	.1353
185	.0750

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 425

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G085)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.0600 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.3153
.018	1.9859
.020	1.2542
.022	2669
.025	2730
.028	.2745
.030	.3380
.036	2699
.039	.3380
.041	9306
.044	1.0138
.049	1.1287
.058	.7341
.068	6494
.077	5874
.085	.5617
.093	5103
.106	.4075
.118	4846
.131	3032
.167	2790
.185	.1172

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 426

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G086) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ.IN XMRP = .0000 IN XT
LREF = 330 2000 IN YMRP = .0000 IN YT
BREF = 330 2000 IN. ZMRP = 0000 IN ZT
SCALE = 0091

BETA = 000 THETA = 225 000
PHI = 000

MACH (1) = 602 ALPHA (1) = 2.960 PO = 22.010 Q(PSI) = 4.3710 RN/L = 5.1300 P = 17.227

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 1.0008
018 .7781
020 .4862
022 .5467
025 .5488
028 .5278
030 .5120
036 .6582
039 .7415
041 .7431
044 .6758
049 .5970
058 .4677
068 .3530
077 .2627
085 .2144
093 .1792
106 .0339
119 .0037
131 -.0889
157 -.3141
185 -.3915

MACH (2) = 795 ALPHA (1) = 2.960 PO = 22.010 Q(PSI) = 6.4210 RN/L = 5.9600 P = 14.509

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 1.0788
018 .8493
020 .5463
022 .6065
025 .6143
028 .5952
030 .5762
036 .7076

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 427

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG086)

MACH (2) = 795 ALPHA (1) = 2 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

T-ETA 225 0000

X/L

.039	.8015
.041	.8109
.044	.7431
.049	.6621
.058	.5316
.068	.4084
.077	.3164
.085	.2644
.093	.2254
.106	.0660
.118	.0314
.131	-.0780
.167	-.3495
.185	-.4608

MACH (3) = .894 ALPHA (1) = 2.980 PO = 22 005 Q(PSI) = 7.3250 RN/L = 6.2600 P = 13 098

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

T-ETA 225 0000

X/L

.016	1.1312
.018	.9934
.020	.5895
.022	.6492
.025	.6555
.028	.6407
.030	.6728
.036	.7590
.039	.8440
.041	.8567
.044	.7912
.049	.7120
.058	.5785
.068	.4537
.077	.3650
.085	.3125
.093	.2720
.106	.1136
.118	.0739
.131	-.0369
.167	-.3187
.185	-.4573

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10086)

MACH (4) = 1.194 ALPHA (1) = 2.980 PO = 22.014 Q(PSI) = 9.1280 RN/L = 6.6700 P = 9.1540

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	1.3026
018	1.0894
020	.8052
.022	.8533
025	.8721
028	.8585
030	.8333
036	.9453
039	1.0356
.041	1.0554
044	1.0045
.049	.9310
.058	.8035
.068	.6932
.077	.6142
.085	.5640
.093	.5346
.106	.3931
.118	.3550
131	.2677
167	.0178
185	-.0832

MACH (5) = 1.463 ALPHA (1) = 2.990 PO = 22.001 Q(PSI) = 9.4710 RN/L = 6.4700 P = 6.3230

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	.5927
.018	1.0294
020	.7610
022	.6139
025	.7602
028	.8043
.030	.8169
036	1.0281
039	1.1634
.041	1.1582
044	1.0832
049	.9816
058	.8399
.068	.7239
077	.6450

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10086)

MACH (5) = 1 463 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

085	.6034
093	.5879
106	.4354
118	.4188
131	.3408
167	.0995
185	.0174

MACH (6) = 1 954 ALPHA (1) = 2 980 PO = 28.015 Q(PSI) = 10 276 RN/L = 7 0700 P = 3 8440

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	.4028
018	1.1254
.020	.8955
.022	.3009
.025	.3513
.028	.3770
.030	.3641
.036	.5341
.039	.8160
.041	1 0126
.044	1 0333
.049	.9660
.058	.8742
.068	.7403
.077	.6698
.085	.6315
.093	.6041
.106	.4667
.118	.4476
.131	.3659
.167	.1485
.185	.0834

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG086)

MACH (7) = 4 960 ALPHA (1) = 2 980 PO = 75 019 Q(P51) = 2 5580 RN/L = 4 2700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	.2291
018	5345
020	1 3086
022	1959
025	2367
028	.2367
.030	.2427
036	2352
039	.3682
041	.9442
044	.9911
049	1 1090
.058	.7583
068	.6842
.077	.6101
085	5632
.093	5375
.106	.4302
.118	.3788
.131	3183
167	1853
.185	.1460

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10087) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 95633 5996 SQ. IN. XMRP = 0000 IN XT
LREF = 330 2000 IN. YMRP = 0000 IN YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = 000 THETA = 225.000
PHI = 000

MACH (1) = .602 ALPHA (1) = 3.960 PO = 22.010 Q(PSI) = 4.3740 RN/L = 5.1300 P = 17.225

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 9934
.018 7877
.020 4996
022 .5441
025 .5633
028 .5501
.030 5135
036 .5442
039 7855
.041 7720
044 6917
.049 6058
.058 4818
068 3703
077 .2809
095 2330
093 1950
106 0480
118 0204
131 - 0786
157 - 2980
165 - 3885

MACH (2) = .792 ALPHA (1) = 3.960 PO = 22.005 Q(PSI) = 6.3920 RN/L = 5.9500 P = 14.546

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 10740
018 8616
020 5582
022 6093
025 6260
028 6146
030 5771
036 6919

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 432

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16087)

MACH (2) = 792 ALPHA (1) = 3 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

039	.8377
041	.8440
044	.7601
049	.6710
056	.5444
068	.4249
.077	.3315
085	.2805
093	.2425
106	.0811
118	.0451
.131	- .0630
.167	- .3379
185	- .4525

MACH (3) = .902 ALPHA (1) = 3 960 PO = 22 005 Q(PSI) = 7.3900 RN/L = 6 2900 P = 12.988

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	1 1258
018	9022
020	6105
022	6568
025	6776
028	6676
030	6323
036	7351
039	8835
041	8966
044	8171
049	7294
058	5998
.068	4784
077	3878
085	.3350
093	2975
.106	1358
.118	0969
.131	- 0124
167	- 2976
185	- .4348

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16087)

MACH (4) = 1.195 ALPHA (1) = 3.960 PO = 22.014 Q(PSI) = 9.1320 RN/L = 6.6800 P = 9.1410

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	1.3047
018	1.1010
.020	.8183
.022	.8596
.025	.8630
.028	.8747
.030	.8412
.036	.9372
.039	1.0736
.041	1.0907
.044	1.0194
.049	.9396
.058	.8218
.068	.7106
.077	.6312
.085	.5845
.093	.5508
.106	.4094
.118	.3862
.131	.2823
.167	.0385
.185	-.0735

MACH (5) = 1.460 ALPHA (1) = 3.960 PO = 21.997 Q(PSI) = 9.4710 RN/L = 6.4800 P = 6.3450

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225.0000

X/L

016	.6780
018	1.1457
.020	.7736
.022	.6221
.025	.7617
.028	.8071
.030	.8271
.036	1.0602
.039	1.1838
.041	1.1706
.044	1.0908
.049	.9905
.058	.8573
.068	.7401
.077	.6641

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G087)

MACH (5) = 1 460 ALPHA (1) = 3 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

085	.6229
093	.6042
106	.4525
.118	.4386
131	.3506
.167	.1204
185	.0228

MACH (6) = 1 952 ALPHA (1) = 3.960 PO = 28 015 Q(PSI) = 10.288 RN/L = 7.0800 P = 3 8570

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	.4957
018	1 3671
020	.9089
022	.3547
.025	.3619
.028	.3796
030	.3498
036	.5472
039	.8495
.041	1.0439
.044	1.0692
049	.9984
.058	.8866
068	.7497
077	.6905
085	.6511
.093	.6208
106	.4838
.118	.4611
.131	.3807
.167	.1620
185	.0931

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TABULATED SOURCE DATA, MSFC,TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16087)

MACH (7) = 4 960 ALPHA (1) = 3 960 PO = 75 036 O(PSI) = 2.5590 RN/L = 4 1600 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

.016	2502
.018	1 1650
.020	1 5817
.022	2563
.025	2080
.028	1998
.030	2502
.036	2064
.039	6159
.041	.8275
.044	.9578
.049	1 0875
.058	7958
.068	7023
.077	.6310
.085	5948
.093	5602
.106	4527
.118	4346
.131	3350
.167	.2336
.185	1384

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G088) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN. XMRP = 0000 IN. XT
 LREF = 330 2000 IN YMRP = 0000 IN. YT
 BREF = 330 2000 IN ZMRP = 0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = 225.000
 PHI = .000

MACH (1) = 601 ALPHA (1) = 4.980 PO = 22 005 Q(PS1) = 4.3620 RN/L = 5 1300 P = 17 235

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 9969
 018 7948
 020 5159
 022 5164
 025 5682
 028 5593
 030 .4799
 036 .6776
 039 8424
 .041 7832
 .044 6962
 .049 6168
 .058 4995
 068 3913
 077 .3063
 085 .2538
 093 .2127
 106 .0701
 118 0374
 131 - 0601
 167 - 2870
 185 -.3784

MACH (2) = 796 ALPHA (1) = 4 980 PO = 22 010 Q(PS1) = 6.4280 RN/L = 5.9700 P = 14.499

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016 1 0715
 .018 8723
 020 5756
 022 6008
 025 6318
 028 6237
 030 5467
 036 7214

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G098)

MACH (2) = .796 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.039	.9084
.041	.8573
.044	.7629
.049	.6827
.058	.5599
.068	.4453
.077	.3577
.085	.3005
.093	.2624
.106	.1025
.118	.0639
.131	-.0450
.167	-.3218
.185	-.4449

MACH (3) = 899 ALPHA (1) = 4.980 PO = 22.010 Q(PSI) = 7.3680 RN/L = 6.2900 P = 13.030

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	1.1207
.018	.9233
.020	.6196
.022	.6495
.025	.6800
.028	.6700
.030	.5954
.036	.7556
.039	.9494
.041	.9073
.044	.8176
.049	.7314
.058	.6106
.068	.4951
.077	.4037
.085	.3505
.093	.3133
.106	.1429
.118	.1130
.131	.0018
.167	-.2839
.185	-.4225

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(PIG088)

MACH (4) = 1 199 ALPHA (1) = 4 980 PO = 22 014 Q(PSI) = 9 1470 RN/L = 6 6900 P = 9 0890

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	1.3066
.018	1.1096
.020	.8322
.022	.8509
.025	.8864
.028	.8821
.030	.8175
.036	.9520
.039	1 1406
.041	1 1070
.044	1 0234
.049	.9481
.058	.8331
.068	.7295
.077	.6499
.085	.5989
.093	.5684
.106	.4271
.118	.3914
.131	.2977
.167	.0502
.185	-.0608

MACH (5) = 1 456 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 9.4770 RN/L = 6.4900 P = 6 3900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	.8360
.018	1 3112
.020	.7780
.022	.6784
.025	.7731
.028	.8131
.030	.8250
.036	1 0608
.039	1 1927
.041	1 1744
.044	1 0959
.049	.9976
.058	.8707
.068	.7559
.077	.6792

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10088)

MACH (5) = 1.456 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.085	.6384
.093	.6172
.106	.4670
.118	.4556
.131	.3609
.167	.1372
.185	.0225

MACH (6) = 1.959 ALPHA (1) = 4.970 PO = 28.015 Q(PSI) = 10.251 RN/L = 7.0700 P = 3.8170

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 225.0000

X/L

.016	.6342
.018	1.6130
.020	.8577
.022	.3915
.025	.3673
.028	.3691
.030	.3306
.036	.5289
.039	.8422
.041	1.0636
.044	1.1001
.049	1.0155
.058	.8892
.068	.7556
.077	.6968
.085	.6579
.093	.6396
.106	.4891
.118	.4722
.131	.3850
.167	.1698
.185	.1002

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10088)

MACH (7) = 4.980 ALPHA (1) = 4.970 PO = 75.036 Q(PSI) = 2 5590 RN/L = 4 0900 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 225 0000

X/L

016	2366
018	2 8234
020	.8895
022	.1913
025	1792
028	1746
030	2336
036	2185
039	8623
041	9001
044	1 0062
049	1.1313
059	.8109
068	7205
077	6477
085	6114
093	5753
106	4648
116	4527
.131	3516
.167	.2502
185	1445

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 441

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16089) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN. XMRP = .0000 IN XT
LREF = 330 2000 IN. YMRP = 0000 IN YT
BREF = 330.2000 IN ZMRP = 0000 IN ZT
SCALE = 0091

BETA = 000 THETA = 247.500
PHI = 000

MACH (1) = 595 ALPHA (1) = -5 040 PO = 22.005 Q(PSI) = 4 2960 RN/L = 4 9400 P = 17.315

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

016 9047
.018 .6367
020 3575
022 .4343
025 .4710
.028 .4638
030 .4397
.036 .5836
.039 5827
041 .5980
.044 .5241
049 .4620
.058 .3174
.068 .2170
.077 .1251
085 0808
093 0431
106 - 0946
.118 - 1206
.131 -.2054
167 - 4147
185 - 4567

MACH (2) = .802 ALPHA (1) = -5 040 PO = 22 010 Q(PSI) = 6.4920 RN/L = 5 9300 P = 14.404

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016 9892
018 .7174
020 4216
022 5025
025 .5406
028 5324
.030 5180
036 6252

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 442

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG089)

MACH (2) = .802 ALPHA (1) = -5 040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.039	.6409
041	6622
044	6002
049	5360
058	3816
068	.2779
077	1779
085	1295
093	0908
106	- 0657
118	- 0973
131	- 1956
167	- 4751
185	- 5465

MACH (3) = 907 ALPHA (1) = -5 040 PO = 22 001 Q(PSI) = 7.4310 RN/L = 6.2600 P = 12 915

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016	1 0424
018	7688
020	.4791
022	5570
025	5919
028	5857
030	5692
036	.6607
039	6866
041	7082
044	6482
049	5919
058	4380
068	3292
077	.2363
085	.1824
093	1411
106	-.0095
118	-.0476
131	-.1502
167	-.4302
185	- 5332

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 443

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16089)

MACH (4) = 1.198 ALPHA (1) = -5.040 PO = 22.010 Q(PSI) = 9.1410 RN/L = 6.6600 P = 9.1040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.2279
.018	.9761
.020	.6724
.022	.7715
.025	.7781
.028	.7752
.030	.7880
.036	.9312
.039	.9423
.041	.9332
.044	.8665
.049	.8078
.058	.6736
.068	.5722
.077	.4904
.085	.4467
.093	.4140
.106	.2738
.118	.2515
.131	.1700
.167	-.0796
.185	-.1568

MACH (5) = 1.453 ALPHA (1) = -5.040 PO = 22.001 Q(PSI) = 9.4760 RN/L = 6.5000 P = 6.4100

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.3699
.018	.5328
.020	.5886
.022	.5879
.025	.6784
.028	.7192
.030	.7245
.036	.9115
.039	.9441
.041	.9796
.044	.9299
.049	.8784
.058	.7159
.068	.6073
.077	.5290

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 444

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G089)

MACH (5) = 1.453 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.085	.4899
.093	.4795
.106	.3295
.118	.3148
.131	.2312
.167	.0079
.185	-.0594

MACH (6) = 1.963 ALPHA (1) = -5.040 PO = 28 015 Q(PST) = 10.230 RN/L = 7.0500 P = 3.7940

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	2330
.018	5432
.020	5612
.022	.2491
.025	3291
.028	3528
.030	3384
.036	4443
.039	6096
.041	.7602
.044	8092
.049	7792
.058	6960
.058	6056
.077	5471
.085	5085
.093	4840
.106	3586
.118	3399
.131	2627
.167	0648
.185	0103

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G089)

MACH (7) = 4.960 ALPHA (1) = -5 040 PO = 75.019 Q(PSI) = 2 5580 RN L = 4 2700 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2231
.018	.2306
.020	.4771
.022	.1551
.025	.1626
.028	.1626
.030	.1913
.036	.2000
.039	1.0682
.041	1.0062
.044	.7069
.049	.7855
.058	.6237
.068	.5330
.077	.4756
.085	.4362
.093	.4105
.106	.3389
.118	.2851
.131	.2352
.167	.1490
.185	.1142

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 446

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G090) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN XMRP = 0000 IN. XT
 LREF = 330 2000 IN YMRP = 0000 IN. YT
 BPE = 330 2000 IN. ZMRP = 0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = 247.500
 PHI = .000

MACH (1) = 595 ALPHA (1) = -4.040 PO = 22.001 Q(PSI) = 4.2970 RN/L = 4.9400 P = 17.310

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

016 .9318
 018 .6659
 020 .3795
 022 .4661
 025 .4944
 028 .4935
 030 .4799
 036 .5413
 039 .5761
 041 .6052
 044 .5503
 049 .4908
 058 .3409
 068 .2368
 077 .1514
 085 .0992
 093 .0630
 106 -.0711
 118 -.1037
 131 -.1901
 167 -.3996
 185 -.4468

MACH (2) = 800 ALPHA (1) = -4.040 PO = 22.010 Q(PSI) = 6.4740 RN/L = 5.9300 P = 14.431

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

016 1.0142
 018 .7420
 020 .4410
 022 .5327
 025 .5615
 028 .5567
 030 .5477
 036 .6003

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG090)

MACH (2) = .800 ALPHA (1) = -4.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

039	6372
041	.6703
044	.6195
.049	5597
058	4060
.068	.2941
077	1995
085	1494
.093	.1075
.106	- 0478
.118	- 0808
.131	- 1825
.167	- 4588
185	- 5366

MACH (3) = .901 ALPHA (1) = -4.040 PO = 22.005 Q(PSI) = 7.3860 RN/L = 6.2500 P = 12.995

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

016	1.0655
018	.7963
020	.4909
022	.5868
.025	.6120
.028	.6056
030	.5973
.036	.6418
039	.6794
041	.7137
044	.6690
.049	.6098
058	.4573
.068	.3479
.077	.2489
085	.1983
.093	.1585
106	.0012
118	- 0334
131	- 1359
167	- 4166
185	- 5182

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG090)

MACH (4) = 1.197 ALPHA (1) = -4.040 PO = 22.010 Q(PSI) = 9.1390 RN/L = 6.6600 P = 9.1090

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2505
.018	.9964
.020	.6847
.022	.7991
.025	.7997
.028	.7990
.030	.8056
.036	.9300
.039	.9468
.041	.9487
.044	.8894
.049	.8261
.058	.8892
.068	.5899
.077	.5077
.085	.4614
.093	.4305
.106	.2892
.118	.2637
.131	.1827
.167	-.0685
.185	-.1471

MACH (5) = 1.456 ALPHA (1) = -4.060 PO = 21.997 Q(PSI) = 9.4730 RN/L = 6.4900 P = 6.3880

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.3788
.018	.5349
.020	.6004
.022	.6221
.025	.7004
.028	.7417
.030	.7564
.036	.9091
.039	.9491
.041	.9890
.044	.9475
.049	.8997
.058	.7368
.068	.6249
.077	.5444

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 449

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10090)

MACH (5) = 1.456 ALPHA (1) = -4.060

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.085	.5062
.093	.4926
.106	.3415
.118	.3302
.131	.2459
.167	.0196
.185	-.0460

MACH (6) = 1.961 ALPHA (1) = -4.080 PO = 28.015 Q(PSI) = 10.242 RN/L = 7.0500 P = 3.8070

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2503
.018	.5346
.020	.5796
.022	.2303
.025	.3302
.028	.3634
.030	.3557
.036	.4634
.039	.6359
.041	.7856
.044	.8270
.049	.7992
.058	.7237
.068	.6233
.077	.5686
.085	.5295
.093	.4981
.106	.3628
.118	.3568
.131	.2740
.167	.0757
.185	.0164

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10090)

MACH (7) = 4.960 ALPHA (1) = -4.060 PO = 75.028 Q(PSI) = 2 5590 RN/L = 4.1600 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2760
.018	.2352
.020	.4754
.022	.2337
.025	.1913
.028	.1928
.030	.2579
.036	.2125
.039	.4603
.041	1.1060
.044	.8913
.049	.8759
.058	.6464
.068	.5572
.077	.4980
.085	.4710
.093	.4287
.106	.3394
.118	.3682
.131	.2412
.167	.2276
.185	.0991

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG091) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330 2000 IN. YMRP = 0000 IN. YT
BREF = 330 2000 IN. ZMRP = 0000 IN. ZT
SCALE = 0091

BETA = 000 THETA = 247 500
PHI = 000

MACH (1) = 599 ALPHA (1) = -3 040 PO = 22.014 Q(PSI) = 4.3420 RN/L = 4.9700 P = 17 267

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016 9527
018 6857
020 3905
022 4933
025 5075
028 5023
030 4908
035 .5520
039 5997
041 6116
044 5627
049 .5076
058 3593
069 2519
077 1606
085 .1159
093 0787
105 - 0593
118 - 0902
131 - 1765
157 -.3887
185 - 4372

MACH 21 = 891 ALPHA (1) = -3 050 PO = 22.005 Q(PSI) = 6 4810 RN/L = 5.9300 P = 14.416

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016 1 0409
018 7654
020 4508
022 5575
025 5727
028 5606
030 5556
035 .6269

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG091)

MACH (2) = 801 ALPHA (1) = -3.050

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

039	6746
041	6865
044	6395
049	.5791
058	.4277
068	.3157
077	2181
085	1666
093	1285
.106	-.0254
.118	-.0670
.131	-.1642
.167	-.4459
.185	-.5231

MACH (3) = .902 ALPHA (1) = -3.040 PO = 22.014 Q(PSI) = 7.3990 RN/L = 6.2600 P = 12.983

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.016	1 0875
.018	.8243
.020	.4975
.022	.6125
.025	.6206
.028	.6094
.030	.5998
.036	.6702
.039	.7166
.041	7278
.044	6875
.049	6267
.058	4738
.068	.3657
.077	2689
.085	2119
.093	1765
.106	0204
.118	- 0223
.131	- 1196
.167	-.4086
.185	-.5067

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10091)

MACH (4) = 1.199 ALPHA (1) = -3.060 PO = 22.001 Q(PSI) = 9.1410 RN/L = 6.6600 P = 9.0860

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

016	1.2682
018	1.0228
.020	.6959
.022	.8094
.025	.8098
.028	.8121
.030	.8197
.036	.9279
.039	.9551
.041	.9578
.044	.9025
.049	.8439
.058	.7058
.068	.6033
.077	.5238
.085	.4763
.093	.4451
.106	.3060
.118	.2769
.131	.1946
.167	-.0571
.185	-.1395

MACH (5) = 1.465 ALPHA (1) = -3.060 PO = 22.014 Q(PSI) = 9.4750 RN/L = 6.4800 P = 6.3080

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

016	.3971
018	.5396
.020	.6136
.022	.6543
.025	.7222
.028	.7667
.030	.7798
.036	.9056
.039	.9566
.041	.9968
.044	.9640
.049	.9166
.058	.7525
.068	.6381
.077	.5609

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16091)

MACH (5) = 1.465 ALPHA (1) = -3 060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

085	5216
093	5046
106	3498
118	.3347
.131	2534
.167	.0283
.185	- 0467

MACH (6) = 1.960 ALPHA (1) = -3 060 PO = 28.011 Q(PS1) = 10.243 RN/L = 7.0500 P = 3 8090

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016	2564
018	.5251
020	5920
022	2245
.025	.3353
028	.3722
030	3651
.035	4758
.039	6536
041	7986
044	8525
.049	8221
.058	7461
068	6447
.077	5860
095	5450
093	5159
106	3831
118	3666
131	2880
.167	0813
185	0239

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG091)

MACH (7) = 4.960 ALPHA (1) = -3.060 PO = 75 028 Q(PSI) = 2.5590 RN/L = 4 1000 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.016	2866
.018	2412
.020	4270
.022	.2790
.025	.2216
.028	2245
.030	2805
.036	.2261
.039	.3152
.041	.9352
.044	1 0516
.049	1 0240
.058	.6373
.068	5648
.077	5056
.085	4831
.093	4393
.106	.3469
.118	.3697
.131	.2488
.167	.2231
.185	.0915

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G092) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5936 SQ IN XMRP = .0000 IN XT
 LREF = 330.2000 IN YMRP = .0000 IN YT
 BREF = 330.2000 IN. ZMRP = 0000 IN ZT
 SCALE = .0091

BETA = .000 THETA = 247.500
 PHI = .000

MACH (1) = 598 ALPHA (1) = -2 040 PO = 21 997 Q(PS1) = 4 3280 RN/L = 4 9500 P = 17 267

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016 9565
 .018 7045
 .020 3723
 .022 .4573
 .025 4763
 .028 4635
 .030 4896
 .036 .6301
 .039 .6925
 .041 6610
 .044 5872
 .049 5171
 .058 .3807
 .068 .2679
 .077 1774
 .085 .1325
 .093 0935
 .106 - 0451
 .118 - 0745
 .131 - 1666
 .167 - 3754
 .185 - 4349

MACH (2) = 802 ALPHA (1) = -2 040 PO = 22.014 Q(PS1) = 6 4850 RN/L = 5.9400 P = 14.419

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.016 1 0325
 .018 7843
 .020 4335
 .022 5204
 .025 5378
 .028 .5354
 .030 .5586
 .036 .7106

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG092)

MACH (2) = .802 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.039	7541
.041	7295
.044	6587
.049	5908
.058	.4445
.068	3298
.077	2357
.085	1827
.093	1427
.106	- 0079
.118	-.0521
.131	-.1521
.167	-.4310
.185	- 5162

MACH (3) = .902 ALPHA (1) = -2.040 PO = 22.010 Q(PS1) = 7.3930 RN/L = 6.2600 P = 12.988

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.0821
.018	.8416
.020	.4805
.022	.5601
.025	.5871
.028	.5835
.030	.6131
.036	.7544
.039	.7999
.041	.7818
.044	.7095
.049	.6389
.058	.4963
.068	.3817
.077	.2865
.085	.2359
.093	.1914
.106	.0398
.118	-.0014
.131	-.1075
.167	-.3918
.185	-.4991

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10092)

MACH (4) = 1.200 ALPHA (1) = -2.060 PO = 22.010 Q(PSI) = 9.1500 RN/L = 6.6600 P = 9.0710

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016	1.2511
018	1.0434
.020	.6835
022	.7298
025	.7923
028	.8023
030	.8333
.036	.9711
039	1.0076
041	.9864
.044	.9204
049	.8525
058	.7229
068	.6176
077	.5356
.085	.4916
.093	.4578
106	.3185
118	.2904
131	.2062
167	-.0457
185	-.1320

MACH (5) = 1.466 ALPHA (1) = -2.040 PO = 22.014 Q(PSI) = 9.4740 RN/L = 6.4800 P = 6.2930

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016	.4035
018	.5839
020	.6300
022	.6805
.025	.7513
.028	.7941
030	.8064
036	.9110
039	.9635
.041	1.0076
.044	.9837
049	.9341
058	.7713
068	.6549
077	.5753

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 459

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G092)

MACH (5) = 1.466 ALPHA (1) = -2.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.085	.5345
.093	.5176
.106	.3618
.118	.3435
.131	.2640
.167	.0389
.185	-.0382

MACH (6) = 1.960 ALPHA (1) = -2.060 PO = 28.011 Q(PSI) = 10.245 RN/L = 7.0500 P = 3.8120

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2639
.018	.5057
.020	.6030
.022	.2246
.025	.3419
.028	.3808
.030	.3734
.036	.4819
.039	.6656
.041	.8155
.044	.8758
.049	.8451
.058	.7720
.068	.6647
.077	.6030
.085	.5589
.093	.5299
.106	.3929
.118	.3787
.1	.2981
.167	.0904
.185	.0296

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 460

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G092)

MACH (7) = 4.950 ALPHA (1) = -2 040 PO = 75 036 Q(PS1) = 2.5590 RN/L = 4.0600 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	3016
.018	3.0790
.020	3968
.022	.3093
.025	.2624
.028	.2683
.030	.3137
.036	.2669
.039	.2895
.041	.6734
.044	1 0924
.049	1 0452
.058	6537
.068	5874
.077	5283
.085	4965
.093	4559
.106	3620
.118	3817
.131	2579
.167	.2290
.185	.0931

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 461

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG093) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN. XMRP = .0000 IN. XT
LREF = 330 2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 247 500
PHI = .000

MACH (1) = .598 ALPHA (1) = -1.040 PO = 22.005 Q(PSI) = 4.3310 RN/L = 4 9600 P = 17 272

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016 9083
.018 6920
.020 3514
.022 3287
.025 4441
.028 4970
.030 5596
.032 7357
.034 7471
.041 6826
.044 5997
.049 5229
.050 3866
.060 2796
.077 1844
.085 1404
.093 1087
.106 - 0360
.118 - 0664
.131 - 1514
.167 - 3714
.185 - 4269

MACH (2) = .800 ALPHA (1) = -1.040 PO = 22.010 Q(PSI) = 6.4630 RN/L = 5 9400 P = 14.446

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016 .9956
.018 7832
.020 4167
.022 .4012
.025 5178
.028 5565
.030 .6209
.036 .7902

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 462

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G093)

MACH (2) = .800 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.039	8139
.041	.7588
.044	6687
.049	5947
.058	4555
.068	.3376
.077	2459
.085	.1959
.093	.1550
.106	0004
.118	- 0372
.131	-.1424
.167	-.4178
.185	-.5118

MACH (3) = .902 ALPHA (1) = -1.040 PO = 22.010 Q(PS1) = 7.3980 RN/L = 6.2700 P = 12.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.0365
.018	.8250
.020	.4586
.022	.4655
.025	.5740
.028	.6088
.030	.6671
.036	.8322
.039	8585
.041	8087
.044	.7198
.049	.6413
.058	.5062
.068	3905
.077	2948
.085	2455
.093	.2044
.106	.0462
.118	0109
.131	- 0966
.167	-.3824
.185	- 4939

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10093)

MACH (4) = 1.199 ALPHA (1) = -1.050 PO = 22.001 Q(PSI) = 9.1410 RN/L = 6.6700 P = 9.0860

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.1837
.018	1.0220
.020	.6798
.022	.6972
.025	.8064
.028	.8508
.030	.8779
.036	1.0239
.039	1.0507
.041	1.0069
.044	.9308
.049	.8602
.058	.7324
.068	.6274
.077	.5452
.085	.5011
.093	.4700
.106	.3267
.118	.3023
.131	.2166
.167	-.0381
.185	-.1290

MACH (5) = 1.466 ALPHA (1) = -1.060 PO = 22.022 Q(PSI) = 9.4770 RN/L = 6.4900 P = 6.2950

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.4134
.018	.6100
.020	.6447
.022	.6846
.025	.7737
.028	.8133
.030	.8267
.036	.9166
.039	.9803
.041	1.0238
.044	.9996
.049	.9456
.058	.7855
.068	.6668
.077	.5867

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10093)

MACH (5) = 1.466 ALPHA (1) = -1.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L	
.085	.5456
.093	.5280
.106	.3712
.118	.3547
.131	.2745
.167	.0471
.185	-.0344

MACH (6) = 1.959 ALPHA (1) = -1.060 PO = 28.028 Q(PSI) = 10.254 RN/L = 7.0600 P = 3.8170

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L	
.016	.2803
.018	.5142
.020	.6266
.022	.2326
.025	.3501
.028	.3910
.030	.3806
.036	.4814
.039	.6719
.041	.8303
.044	.9003
.049	.8686
.058	.7968
.068	.6797
.077	.6220
.085	.5702
.093	.5458
.106	.4042
.118	.3930
.131	.3071
.167	.0982
.185	.0360

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G093)

MACH (7) = 4.960 ALPHA (1) = -1.040 PO = 75.028 Q(PSI) = 2.5590 RN/L = 4.2600 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2533
.018	.2488
.020	.4996
.022	.3032
.025	.3002
.028	.3016
.030	.3002
.036	.2972
.039	.2970
.041	.4725
.044	1 0425
.049	1 0421
.058	.6388
.068	.5889
.077	.5237
.085	.4756
.093	.4559
.106	.3560
.118	.3153
.131	.2594
.167	.1581
.185	.1248

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16094) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = 0000 IN XT
 LREF = 330.2000 IN. YMRP = 0000 IN YT
 BREF = 330.2000 IN. ZMRP = 0000 IN ZT
 SCALE = .0091

BETA = .000 THETA = 247.500
 PHI = .000

MACH (1) = .599 ALPHA (1) = -.020 PO = 22.014 Q(PSI) = 4.3400 RN/L = 4 9700 P = 17 270

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X L

016 8722
 .018 7037
 .020 .3619
 .022 3395
 .025 4602
 .028 .5463
 .030 6001
 .036 7800
 .039 7653
 .041 6902
 .044 6001
 .049 5320
 .058 .3984
 .068 .2891
 .077 .2016
 .085 .1513
 .093 .1172
 .106 -.0209
 .118 -.0556
 .131 -.1455
 .167 -.3625
 .185 -.4253

MACH (2) = 800 ALPHA (1) = -.020 PO = 22.005 Q(PSI) = 6.4670 RN/L = 5.9400 P = 14 436

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X L

016 9403
 .018 7921
 .020 4234
 .022 4131
 .025 .5560
 .028 6280
 .030 6672
 .036 8331

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG094)

MACH (2) = 800 ALPHA (1) = -.020

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.039	.8266
.041	.7658
.044	.6763
.049	.6023
.058	.4682
.068	.3524
.077	.2571
.085	.2095
.093	.1705
.106	.0131
.118	-.0223
.131	-.1299
.167	-.4041
.185	-.5058

MACH (3) = .902 ALPHA (1) = -.020 PO = 22.010 Q(PSI) = 7.3950 RN/L = 6.2800 P = 12.985

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.9620
.018	.8450
.020	.4731
.022	.4816
.025	.6191
.028	.6785
.030	.7095
.036	.8616
.039	.8698
.041	.8124
.044	.7264
.049	.6524
.058	.5166
.068	.4018
.077	.3110
.085	.2562
.093	.2169
.106	.0627
.118	.0220
.131	-.0852
.167	-.3673
.185	-.4863

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G094)

MACH (4) = 1.199 ALPHA (1) = - 040 PO = 22 014 Q(PS1) = 9.1470 RN/L = 6.6900 P = 9.0890

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.1464
018	1.0530
020	.6957
022	.7128
025	.8314
.028	.8712
.030	.8999
036	1 0378
039	1 0602
041	1 0174
044	.9401
049	.8691
058	.7435
068	.6411
.077	.5553
.085	.5123
.093	.4825
.106	.3370
.118	.3127
.131	.2274
167	-.0279
185	-.1193

MACH (5) = 1.466 ALPHA (1) = -.040 PO = 22.014 Q(PS1) = 9.4740 RN/L = 6.4900 P = 6.2930

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

016	.4315
018	.6573
020	.6643
.022	.6711
025	.7835
028	.8231
030	.8334
.036	.9211
.039	1 0076
041	1 0499
.044	1 0227
.049	.9558
058	.7978
068	.6770
077	.5970

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G094)

MACH (5) = 1.466 ALPHA (1) = -.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.085	.5569
.093	.5390
.106	.3822
.118	.3669
.131	.2835
.167	.0581
.185	-.0275

MACH (6) = 1.954 ALPHA (1) = -.040 PO = 28.007 Q(PSI) = 10.272 , RN/L = 7.0700 P = 3.8420

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2947
.018	.5663
.020	.6722
.022	.2360
.025	.3581
.028	.3952
.030	.3852
.036	.4809
.039	.6839
.041	.8550
.044	.9273
.049	.8879
.058	.8320
.068	.6896
.077	.6368
.085	.5794
.093	.5589
.106	.4136
.118	.4081
.131	.3144
.167	.1050
.185	.0436

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G094)

MACH (7) = 4.960 ALPHA (1) = -.040 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1500 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016	.2881
018	.2473
020	.5693
.022	.3546
.025	.3259
.028	.3304
.030	.3501
.036	.3244
039	.3244
041	.4347
.044	.9714
.049	1 0606
.058	.6797
.068	.6071
.077	.5451
.085	.5088
.093	.4725
.106	.3743
.118	.3758
.131	.2699
.167	.2095
.185	.1052

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 471

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG095) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = 0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 247 500
PHI = .000

MACH (1) = 601 ALPHA (1) = .970 PO = 22.010 Q(PSI) = 4.3630 RN/L = 4.9900 P = 17.237

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L
.016 .9786
.018 .7300
.020 .3919
.022 .4727
.025 .4578
.028 .5020
.030 .5584
.036 .7912
.039 .7631
.041 .7044
.044 .6201
.049 .5464
.058 .4186
.068 .3052
.077 .2143
.085 .1701
.093 .1341
.106 -.0076
.118 -.0386
.131 -.1301
.167 -.3429
.195 -.4129

MACH (2) = .797 ALPHA (1) = .960 PO = 22.014 Q(PSI) = 6.4430 RN/L = 5.9200 P = 14.481

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L
.016 1.0481
.018 .8157
.020 .4561
.022 .4822
.025 .5281
.028 .5636
.030 .6203
.036 .8480

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G095)

MACH (2) = 797 ALPHA (1) = 960

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.039	.8246
.041	.7759
.044	.6854
.049	.6140
.058	.4850
.068	.3625
.077	.2713
.085	.2230
.093	.1801
.106	.0271
.118	- .0107
.131	- .1199
.167	- .2975
.185	- .4925

MACH (3) = .902 ALPHA (1) = .960 PO = 22.005 Q(PSI) = 7.3920 RN/L = 6.2600 P = 12.985

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.016	.0668
.018	.8655
.020	.5063
.022	.5361
.025	.5838
.028	.6183
.030	.6699
.036	.8871
.039	.8704
.041	.8218
.044	.7391
.049	.6685
.058	.5332
.068	.4164
.077	.3243
.085	.2719
.093	.2328
.106	.0769
.118	.0378
.131	- .0726
.167	- .3543
.185	- .4800

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10095)

MACH (4) = 1.196 ALPHA (1) = .960 PO = 21.997 Q(PSI) = 9.1310 RN/L = 6.6000 P = 9.1140

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.2447
.018	1.0714
.020	.7224
.022	.7541
.025	.8028
.028	.8356
.030	.8715
.036	1.0602
.039	1.0603
.041	1.0176
.044	.9480
.049	.8818
.058	.7558
.068	.6522
.077	.5706
.085	.5211
.093	.4930
.106	.3506
.118	.3191
.131	.2340
.167	-.0164
.185	-.1104

MACH (5) = 1.456 ALPHA (1) = .960 PO = 22.010 Q(PSI) = 9.4790 RN/L = 6.5200 P = 6.3900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.4033
.018	.6964
.020	.6878
.022	.6507
.025	.7882
.028	.8356
.030	.8445
.036	.9460
.039	1.0560
.041	1.0898
.044	1.0411
.049	.9592
.058	.8066
.068	.6846
.077	.6045

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NO' CAP

(RIG095)

MACH (5) = 1.456 ALPHA (1) = 960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.095	.5641
.093	.5471
.106	.3956
.118	.3862
.131	.2905
.167	.0666
.185	-.0194

MACH (6) = 1.955 ALPHA (1) = 960 P0 = 28.019 Q(PSI) = 10.273 RN/L = 7.0800 P = 3.8390

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2937
.018	.6619
.020	.7200
.022	.2427
.025	.3397
.028	.3833
.030	.3772
.036	.4970
.039	.7275
.041	.9002
.044	.9560
.049	.9013
.058	.8441
.058	.6927
.077	.6387
.085	.5887
.093	.5660
.106	.4205
.118	.4156
.131	.3257
.167	.1146
.185	.0496

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G095)

MACH (7) = 4.960 ALPHA (1) = 960 PO = 75.028 Q(P51) = 2.5590 RN/L = 4.0800 P = 14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2986
.018	.2442
.020	.7704
.022	.3304
.025	.3093
.028	.3077
.030	.3409
.036	.3077
.039	.3077
.041	.5902
.044	1.0712
.049	1.0863
.058	.6930
.068	.6207
.077	.5742
.085	.5253
.093	.4831
.106	.3818
.118	.3953
.131	.2805
.167	.2305
.185	1.167

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 476

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10096) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN YMRP = .0000 IN. YT
 BREF = 330.2000 IN ZMRP = .0000 IN. ZT
 SCALE = 0091

BETA = .000 THETA = 247.500
 PHI = .000

MACH (1) = 600 ALPHA (1) = 1.980 PO = 22.005 Q(PS1) = 4.3520 RN/L = 4.9800 P = 17.247

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016 1.0067
 .018 .7417
 .020 .4314
 .022 .5244
 .025 .5054
 .028 .4866
 .030 .4986
 .036 .6948
 .039 .7217
 .041 .7061
 .044 .6361
 .049 .5587
 .058 .4294
 .068 .3196
 .077 .2257
 .085 .1811
 .093 .1444
 .106 - .0013
 .118 - .0299
 .131 - .1223
 .167 - .3367
 .185 - .4104

MACH (2) = .796 ALPHA (1) = 1.980 PO = 22.010 Q(PS1) = 6.4330 RN/L = 5.9100 P = 14.491

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016 1.0923
 .018 .8195
 .020 .4962
 .022 .5501
 .025 .5752
 .028 .5568
 .030 .5652
 .036 .7531

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG096)

MACH (2) = 796 ALPHA (1) = 1 980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

039	7917
.041	.7724
.044	.7068
.049	.6295
.058	.4935
.068	.3793
.077	.2848
.085	.2285
.093	.1948
.106	.0367
.118	- .0064
.131	-.1062
.167	-.3829
.185	-.4824

MACH (3) = .899 ALPHA (1) = 1.980 PO = 21.997 Q(PS1) = 7.3650 RN/L = 6.2400 P = 13.020

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.1483
.018	.8780
.020	.5443
.022	.5942
.025	.6216
.028	.6063
.030	.6191
.036	.7938
.039	.8343
.041	.8228
.044	.7544
.049	.6830
.058	.5441
.068	.4277
.077	.3358
.085	.2805
.093	.2418
.106	.0853
.118	.0433
.131	-.0648
.167	-.3519
.185	-.4814

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16096)

MACH (4) = 1.194 ALPHA (1) = 1.980 PO = 21.997 Q(PSI) = 9.1230 RN/L = 6.6500 P = 9.1440

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.3266
.018	1.0733
.020	.7579
.022	.8116
.025	.8351
.028	.8198
.030	.8225
.035	.9690
.039	1.0203
.041	1.0181
.044	.9626
.049	.8940
.058	.7703
.068	.6626
.077	.5808
.085	.5326
.093	.5024
.106	.3582
.118	.3302
.131	.2400
.167	-.0056
.195	-.1091

MACH (5) = 1.458 ALPHA (1) = 1.960 PO = 22.010 Q(PSI) = 9.4770 RN/L = 6.5100 P = 6.3700

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.4409
.018	.7449
.020	.7050
.022	.6339
.025	.7703
.028	.8205
.030	.8225
.035	.9673
.039	1.1005
.041	1.1136
.044	1.0505
.049	.9581
.058	.8103
.068	.6899
.077	.6135

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 479

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG096)

MACH (5) = 1.458 ALPHA (1) = 1.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L	
.085	.5727
.093	.5565
.106	.4053
.118	.3902
.131	.2999
.167	.0727
.185	-.0130

MACH (6) = 1.953 ALPHA (1) = 1.960 PO = 28.015 Q(PSI) = 10.283 RN/L = 7.0800 P = 3.8520

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L	
.016	.3111
.018	.7384
.020	.7696
.022	.2432
.025	.3334
.028	.3787
.030	.3698
.036	.5270
.039	.7610
.041	.9305
.044	.9793
.049	.9160
.058	.8492
.068	.7045
.077	.6489
.085	.5956
.093	.5838
.106	.4337
.118	.4229
.131	.3293
.167	.1215
.185	.0556

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 480 .

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG096)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.036 Q(PSI) = 2.5590 RN/L = 4.0500 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.016	2940
.018	2669
.020	1 0210
.022	2881
.025	.2594
.028	2608
.030	3122
.036	2654
.039	.3258
.041	9016
.044	1 0470
.049	1 1117
.058	.6991
.068	.6267
.077	5600
.085	5313
.093	4907
.106	3862
.118	.4164
.131	.2881
.167	.2396
.185	.1112

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G097) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = 000 THETA = 247 500
PHI = 000

MACH (1) = .600 ALPHA (1) = 2.980 PO = 22 014 Q(PSI) = 4.3520 RN/L = 4.9800 P = 17.255

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.016 9829
.018 7446
.020 .4594
.022 .5341
.025 .5413
.028 .5260
.030 .5041
.036 6063
.039 .6831
.041 .7093
.044 .6516
.049 .5748
.058 4437
.068 3251
.077 2791
.085 1896
.093 1525
.106 0082
.118 - 0218
.131 - 1187
.167 -.3291
.185 - 4141

MACH (2) = .795 ALPHA (1) = 2 980 PO = 22.005 Q(PSI) = 6 4210 RN/L = 5 9100 P = 14.504

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.016 1 0676
.018 8234
.020 .5217
.022 .5899
.025 6087
.028 5940
.030 .5737
.036 6671

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G097)

MACH (2) = .795 ALPHA (1) = 2 980

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.039	.7442
.041	.7755
.044	.7230
.049	.6459
.058	.5062
.068	.3854
.077	.2956
.085	.2417
.093	.2024
.106	.0460
.118	.0062
.131	-.1009
.167	-.3702
.185	-.4831

MACH (3) = .899 ALPHA (1) = 2 980 PO = 22.010 Q(PSI) = 7.3680 RN/L = 6.2400 P = 13.030

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.1166
.018	.8756
.020	.5682
.022	.6400
.025	.6538
.028	.6386
.030	.6224
.036	.7116
.039	.7908
.041	.8171
.044	.7725
.049	.6958
.058	.5547
.068	.4337
.077	.3425
.085	.2893
.093	.2504
.106	.0931
.118	.0526
.131	-.0579
.167	-.3392
.185	-.4787

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G097)

MACH (4) = 1.192 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 9.1180 RN/L = 6.6500 P = 9.1740

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.2946
.018	1.0672
.020	.7787
.022	.8403
.025	.8627
.028	.8500
.030	.8315
.036	.9077
.039	.9806
.041	1.0169
.044	.9785
.049	.9039
.058	.7776
.068	.6688
.077	.5852
.085	.5389
.093	.5110
.106	.3642
.118	.3365
.131	.2454
.167	-.0014
.185	-.1083

MACH (5) = 1.457 ALPHA (1) = 2.980 PO = 22.014 Q(PSI) = 9.4790 RN/L = 6.5100 P = 6.3750

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.4977
.018	.8858
.020	.7168
.022	.5989
.025	.7474
.028	.7988
.030	.8065
.036	1.0001
.039	1.1280
.041	1.1240
.044	1.0495
.049	.9518
.058	.8172
.068	.6964
.077	.6197

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G097)

MACH (5) = 1 457 ALPHA (1) = 2.980

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.085	.5814
.093	.5633
.106	.4125
.118	.3970
.131	.3078
.167	.0824
.185	.0089

MACH (6) = 1 954 ALPHA (1) = 2 960 PO = 28.011 Q(PSI) = 10.275 RN/L = 7.0700 P = 3 8440

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.3409
.018	.8478
.020	.8161
.022	.2751
.025	.3384
.028	.3713
.030	.3571
.036	.5248
.039	.7631
.041	.9410
.044	.9921
.049	.9279
.058	.8450
.068	.7169
.077	.6524
.085	.6026
.093	.5915
.106	.4368
.118	.4275
.131	.3365
.167	.1271
.185	.0590

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G097)

MACH (7) = 4.960 ALPHA (1) = 2.980 PO = 75.019 Q(PS1) = 2.5580 RN/L = 4.2500 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2337
.018	.3486
.020	1.2360
.022	.1853
.025	.2231
.028	.2276
.030	.2382
.036	.2231
.039	.4045
.041	.9926
.044	.9684
.049	1.0531
.058	.7008
.068	.6358
.077	.5708
.085	.5300
.093	.4907
.106	.3954
.118	.3470
.131	.2866
.167	.1717
.185	.1324

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G09B) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN XMRP = .0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN ZMRP = .0000 IN ZT
 SCALE = 0091

BETA = .000 THETA = 247.500
 PHI = .000

MACH (1) = .601 ALPHA (1) = 3 960 PO = 22.005 Q(PSI) = 4.3540 RN/L = 4.9800 P = 17.245

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016 .9750
 .018 .7480
 .020 .4647
 .022 .5127
 .025 .5455
 .028 .5375
 .030 .4974
 .036 .5659
 .039 .7258
 .041 .7366
 .044 .6583
 .049 .5757
 .058 .4423
 .068 .3315
 .077 .2453
 .085 .1924
 .093 .1565
 .105 .0153
 .118 -.0209
 .131 -.1160
 .167 -.3322
 .185 -.4170

MACH (2) = .794 ALPHA (1) = 3 960 PO = 22.010 Q(PSI) = 6.4070 RN/L = 5.9100 P = 14.529

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016 1.0540
 .018 .8187
 .020 .5297
 .022 .5787
 .025 .6141
 .028 .6053
 .030 .5697
 .036 .6304

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G098)

MACH (2) = .794 ALPHA (1) = 3.950

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.039	.7739
.041	.8082
.044	.7347
.049	.6463
.058	.5093
.068	.3904
.077	.3001
.085	.2473
.093	.2089
.106	.0517
.118	.0130
.131	-.0967
.167	-.3637
.185	-.4826

MACH (3) = .897 ALPHA (1) = 3.960 PO = 22.005 Q(PSI) = 7.3500 RN/L = 6.2400 P = 13.055

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.1041
.018	.8715
.020	.5726
.022	.6307
.025	.6599
.028	.6516
.030	.6234
.036	.6710
.039	.8018
.041	.8548
.044	.7840
.049	.6964
.058	.5603
.068	.4390
.077	.3471
.085	.2974
.093	.2586
.106	.0984
.118	.0602
.131	-.0516
.167	-.3283
.185	-.4755

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16098)

MACH (4) = 1.192 ALPHA (1) = 3.960 PO = 22.010' Q(PSI) = 9.1230 RN/L = 6.6600 P = 9.1660

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

016	1.2812
.018	1.0659
020	.7863
022	.8320
025	.8655
028	.8584
030	.8248
.036	.8816
.039	1.0008
041	1.0411
.044	.9900
049	.9058
.058	.7810
068	.6759
.077	.5926
085	.5439
.093	.5193
.106	.3714
118	.3425
131	.2544
167	.0004
185	-.1014

MACH (5) = 1.460 ALPHA (1) = 3.960 PO = 22.014 Q(PSI) = 9.4780 RN/L = 6.5100 P = 6.3530

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

016	.5535
.018	.9445
.020	.7315
.022	.5959
.025	.7275
.028	.7797
.030	.8005
.036	1.0104
.039	1.1328
041	1.1267
.044	1.0508
.049	.9509
.058	.8246
068	.7062
077	.6263

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G098)

MACH (5) = 1.460 ALPHA (1) = 3.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.085	.5886
.093	.5731
.106	.4175
.118	.4053
.131	.3159
.167	.0881
.185	-.0065

MACH (6) = 1.956 ALPHA (1) = 3.960 P0 = 28.019 Q (PSI) = 10.270 RN/L = 7.0800 P = 3.8370

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.3832
.018	.9920
.020	.8569
.022	.3411
.025	.3412
.028	.3723
.030	.3485
.036	.5122
.039	.7771
.041	.9528
.044	1.0019
.049	.9506
.058	.8487
.068	.7148
.077	.6620
.085	.6120
.093	.5958
.106	.4491
.118	.4348
.131	.3453
.167	.1367
.185	.0616

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G09B)

MACH (7) = 4.960 ALPHA (1) = 3.960 PO = 75 044 Q(PSI) = 2.5590 RN/L = 4.1500 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.2608
.018	.4861
.020	1.3006
.022	.1989
.025	.1958
.028	.1928
.030	.2532
.036	.2003
.039	.3802
.041	.8124
.044	.8910
.049	1.0043
.058	.7656
.068	.6567
.077	.5827
.085	.5509
.093	.5101
.106	.4089
.118	.4164
.131	.3031
.167	.2426
.185	.1232

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G099) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN YMRP = .0000 IN YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 247.500
PHI = .000

MACH (1) = .601 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 4.3540 RN/L = 4.9800 P = 17.245

SECTION (1) EXTERNAL TANK NOSE . DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.015 .9664
.018 .7426
.020 .4663
.022 .4898
.025 .5348
.028 .5188
.030 .4460
.035 .5890
.039 .7606
.041 .7302
.044 .76
.049 .5694
.058 .4487
.068 .3377
.077 .2466
.085 .2001
.093 .1619
.106 .0199
.118 -.0121
.131 -.1098
.167 -.3247
.185 -.4170

MACH (2) = .799 ALPHA (1) = 4.980 PO = 22.014 Q(PSI) = 6.4560 RN/L = 5.9300 P = 14.461

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.015 1.0496
.018 .8177
.020 .5360
.022 .5568
.025 .6067
.028 .5880
.030 .5221
.035 .6409

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16099)

MACH (2) = .799 ALPHA (1) = 4 980

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.039	.8212
.041	8078
.044	.7230
.049	6394
.058	5149
.068	.4004
.077	3047
.085	2539
.093	2164
.106	0579
.118	0187
.131	- 0899
.167	- 3599
.185	- 4844

MACH (3) = .903 ALPHA (1) = 4.980 PO = 22.014 Q(PSI) = 7.4040 RN/L = 6.2700 P = 12.975

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

.016	1.0954
.018	8684
.020	5818
.022	6070
.025	.6545
.028	6367
.030	.5772
.035	.6770
.039	8568
.041	.8533
.044	.7763
.049	6921
.058	.5636
.068	4490
.077	3539
.085	.3022
.093	.2682
.106	1045
.118	0664
.131	-.0428
.167	-.3177
.185	- 4657

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G099)

MACH (4) = 1.191 ALPHA (1) = 4.980 PO = 22 005 Q(PS1) = 9 1160 RN/L = 6 6600 P = 9 1810

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	1.2757
.018	1.0655
.020	.7931
.022	.8130
.025	.8614
.028	.8449
.030	.7872
.036	.8860
.039	1.0464
.041	1.0461
.044	.9806
.049	.9017
.058	.7846
.069	.6824
.077	.5975
.085	.5499
.093	.5250
.106	.3778
.118	.3496
.131	.2581
.167	.0075
.185	- 1011

MACH (5) = 1.456 ALPHA (1) = 4.980 PO = 22 018 Q(PS1) = 9.4820 RN/L = 6.5200 P = 6.3850

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247.5000

X/L

.016	.6242
.018	1 .0960
.020	.7474
.022	.6241
.025	.7237
.028	.7780
.030	.7833
.036	1 .0032
.039	1 .1343
.041	1 .1203
.044	1 .0476
.049	.9522
.058	.8274
.069	.7111
.077	.6328

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16099)

MACH (5) = 1.456 ALPHA (1) = 4 980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

085	5936
.093	5777
.106	.4292
.118	.4117
.131	.3215
.167	.0959
.185	- 0031

MACH (6) = 1 956 ALPHA (1) = 4 960 PO = 28 019 Q(PSI) = 10.268 RN/L = 7.0800 P = 3 8340

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016	4492
018	1.1901
020	8682
022	3784
.025	3581
028	.3720
030	3495
036	5028
039	.7736
041	9705
044	1 0305
049	.9666
058	8609
069	7209
077	6687
095	6223
093	6094
.106	4572
.118	4481
.131	.3517
.167	1414
.185	0699

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G099)

MACH (7) = 4 960 ALPHA (1) = 4 960 PC = 75 036 Q(PSI) = 2 5590 RN/L = 4.0700 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 247 5000

X/L

016	.2337
018	.8203
020	1 5318
022	.1974
.025	.1656
.028	.1625
.030	.2155
.036	.1822
039	.5721
041	.7976
044	.8819
049	.9983
058	.7613
068	.6658
077	.5887
085	.5542
.093	.5162
.106	.4149
.118	.3969
.131	.3061
.167	.2201
185	.1217

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 496

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16100) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN XMRP = .0000 IN. XT
LREF = 330 2000 IN YMPP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 270 000
PHI = .000

MACH (1) = 600 ALPHA (1) = -5.040 PO = 22.014 Q(PSI) = 4.3480 RN/L = 5.0000 P = 17.260

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016 .9291
.018 .6975
.020 .3951
.022 .4528
.025 .5018
.028 .4747
.030 .4354
.036 .6738
.039 .6598
.041 .6556
.044 .5780
.049 .5051
.058 .3652
.068 .2704
.077 .1671
.085 .1264
.093 .0905
.106 -.0545
.118 -.0751
.131 -.1603
.157 -.3904
.185 -.4288

MACH (2) = .804 ALPHA (1) = -5.040 PO = 22.018 Q(PSI) = 6.5100 RN/L = 5.9700 P = 14.386

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016 1.0104
.018 .7585
.020 .4752
.022 .5049
.025 .5703
.028 .5499
.030 .5137
.036 .6862

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 497

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G100)

MACH (2) = .804 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.039	.7124
.041	.7213
.044	.6476
.049	.5843
.058	.4322
.068	.3278
.077	.2326
.085	.1805
.093	.1399
.106	-.0158
.118	-.0472
.131	-.1471
.167	-.4417
.185	-.5145

MACH (3) = .905 ALPHA (1) = -5.040 PO = 22.010 Q(PST) = 7.4190 RN/L = 6.2800 P = 12.945

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.0646
.018	.8092
.020	.5280
.022	.5619
.025	.6243
.028	.5968
.030	.5653
.036	.7171
.039	.7503
.041	.7696
.044	.6962
.049	.6339
.058	.4830
.068	.3778
.077	.2785
.085	.2318
.093	.1891
.106	.0333
.118	.0024
.131	-.1011
.167	-.3951
.185	-.4936

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OF POOR QUALITY

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG100)

MACH (4) = 1.198 ALPHA (1) = -5 040 PO = 22.001 Q(PS1) = 9.1390 RN/L = 6 6600 P = 9.0940

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.2533
.018	1.0139
.020	.7468
.022	.7719
.025	.8335
.028	.8138
.030	.7879
.036	.9055
.039	.9425
.041	.9718
.044	.9127
.049	.8565
.058	.7190
.068	.6214
.077	.5371
.085	.4945
.093	.4601
.106	.3210
.118	.2946
.131	.2117
.167	-.0456
.185	-.1223

MACH (5) = 1.454 ALPHA (1) = -5 040 PO = 22.022 Q(PS1) = 9.4850 RN/L = 6.5300 P = 6.4130

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.3950
.018	.7458
.020	.6495
.022	.5659
.025	.7090
.028	.7528
.030	.7682
.036	1.0108
.039	1.0543
.041	1.0610
.044	.9811
.049	.9096
.058	.7523
.068	.6491
.077	.5717

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10100)

MACH (5) = 1.454 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	.5328
.093	.5141
.106	.3687
.118	.3538
.131	.2648
.167	.0368
.185	-.0267

MACH (6) = 1.952 ALPHA (1) = -5.040 PO = 27.994 Q(PSI) = 10.282 RN/L = 7.0300 P = 3.8570

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.3353
.018	.7627
.020	.7562
.022	.2889
.025	.3593
.028	.3635
.030	.3507
.036	.4700
.039	.6644
.041	.8428
.044	.8965
.049	.8587
.058	.7888
.068	.5422
.077	.5975
.085	.5624
.093	.5488
.106	.3986
.118	.3912
.131	.3027
.167	.1089
.185	.0424

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 500

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG100)

MACH (7) = 4.960 ALPHA (1) = -5 040 PO = 75 044 Q(PSI) = 2.5590 RN/L = 4.2300 P = 14900

SECTION (1,EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0900

X/L

.016	.1911
.018	.3259
.020	1.2254
.022	.1923
.025	.1883
.028	.1883
.030	.1896
.036	.1838
.039	.2987
.041	.6034
.044	.7689
.049	.8943
.058	.6774
.068	.5965
.077	.5300
.085	.4871
.093	.4535
.106	.3652
.118	.3210
.131	.2699
.167	.1594
.185	.1263

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG101) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN. XMPP = .0000 IN. XT
LREF = 330.2000 IN YMRP = .0000 IN. YT
BREF = 330.2000 IN ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 270.000
PHI = .000

MACH (1) = 596 ALPHA (1) = -4.060 PO = 22 005 Q(PSI) = 4.3040 RN/L = 4.9700 P = 17.305

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 .9465
.018 .7055
.020 .4174
.022 .4862
.025 .5170
.028 .5019
.030 .4866
.036 .5854
.039 .6204
.041 .6474
.044 .5836
.049 .5243
.058 .3797
.068 .2742
.077 .1884
.085 .1381
.093 .0979
.106 -.0414
.118 -.0648
.131 -.1557
.167 -.3782
.185 -.4264

MACH (2) = .800 ALPHA (1) = -4.040 PO = 21.997 Q(PSI) = 6.4640 RN/L = 5.9500 P = 14.431

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 1.0301
.018 .7752
.020 .4915
.022 .5274
.025 .5865
.028 .5746
.030 .5545
.036 .6338

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16101)

MACH (2) = 800 ALPHA (1) = -4.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.039	.6821
.041	.7168
.044	.6589
.049	.6009
.058	.4467
.068	.3351
.077	.2465
.085	.1909
.093	.1465
.106	-.0043
.118	-.0384
.131	-.1425
.167	-.4301
.185	-.5082

MACH (3) = 906 ALPHA (1) = -4.040 PO = 22.005 Q(PSI) = 7.4250 RN/L = 6.2700 P = 12.930

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.0812
.018	.8254
.020	.5390
.022	.5916
.025	.6420
.028	.6234
.030	.6069
.036	.6723
.039	.7182
.041	.7612
.044	.7108
.049	.6494
.058	.4970
.068	.3894
.077	.2937
.085	.2426
.093	.2014
.106	.0431
.118	.0118
.131	-.0923
.167	-.3868
.185	-.4376

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG101)

MACH (4) = 1.199 ALPHA (1) = -4 040 PO = 22.005 Q(PSI) = 9.1430 RN/L = 6 6600 P = 9.0890

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.2712
.018	1.0257
.020	.7537
.022	.7978
.025	.8464
.028	.8350
.030	.8221
.036	.8773
.039	.9222
.041	.9621
.044	.9213
.049	.8676
.058	.7290
.068	.6298
.077	.5447
.085	.5015
.093	.4682
.106	.3267
.118	.3010
.131	.2174
.167	-.0372
.185	-.1172

MACH (5) = 1.455 ALPHA (1) = -4 060 PO = 22 014 Q(PSI) = 9.4810 RN/L = 6 5100 P = 6 3980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016	.3870
.018	.7079
.020	.6491
.022	.5909
.025	.7331
.028	.7837
.030	.7866
.036	.9925
.039	1.0492
.041	1.0661
.044	.9946
.049	.9248
.058	.7629
.068	.6572
.077	.5797

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG101)

MACH (5) = 1.455 ALPHA (1) = -4.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	5388
.093	5206
.106	3729
.118	3576
.131	2713
.167	.0401
.185	-.0251

MACH (6) = 1.959 ALPHA (1) = -4.080 PO = 28.003 Q(PSI) = 10.246 RN/L = 6.9700 P = 3.8140

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.3110
.018	.7118
.020	.7343
.022	.2655
.025	3482
.028	3674
.030	.3510
.036	.4761
.039	6732
.041	8481
.044	.9026
.049	.8596
.058	.7873
.068	6550
.077	6052
.085	5599
.093	5429
.106	3976
.118	4005
.131	.2953
.167	0990
.185	0504

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10101)

MACH (7) = 4.960 ALPHA (1) = -4.060 PO = 75.019 Q(PSI) = 2 5580 RN/L = 4.1400 P * .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THEJA 270.0000

X/L

.016	2624
.018	2851
.020	1 1256
.022	.1913
.025	1883
.028	1944
.030	2548
.036	2034
.039	5103
.041	.8490
.044	.8036
.049	9155
.058	.7114
.068	6010
.077	.5406
.085	.5088
.093	.4665
.106	3682
.118	4000
.131	.2745
.167	.2412
.185	1127

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG102) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = 0000 IN XT
 LREF = 330 2000 IN YMRP = 0000 IN YT
 BREF = 330 2000 IN ZMRP = 0000 IN ZT
 SCALE = 0091

PARAMETRIC DATA

BETA = 000 THETA = 270.000
 PHI = 000

MACH (1) = .596 ALPHA (1) = -3.060 PO = 22 005 Q(PS1) = 4.3020 RN/L = 4.9700 P = 17.307

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016 9659
 .018 7174
 .020 4246
 .022 5103
 .025 5296
 .028 .5189
 .030 5098
 .036 5629
 .039 6106
 .041 6367
 .044 5926
 .049 .5342
 .058 .3884
 .068 .2814
 .077 .1929
 .085 .1456
 .093 1059
 .106 - 0315
 .118 - 0585
 .131 - 1467
 .167 - 3724
 .185 -.4165

MACH (2) = .802 ALPHA (1) = -3.060 PO = 22.014 Q(PS1) = 6.4900 RN/L = 5.9600 P = 14.411

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016 1 0526
 .018 7860
 .020 4902
 .022 5618
 .025 5977
 .028 .5877
 .030 .5796
 .036 6299

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G102)

MACH (2) = 802 ALPHA (1) = -3.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.039	.6793
.041	.7098
.044	.6657
.049	.6073
.058	.4590
.068	.3461
.077	.2300
.085	.1998
.093	.1571
.106	-.0008
.118	-.0306
.131	-.1344
.167	-.4199
.185	-.5016

MACH (3) = .901 ALPHA (1) = -3.060 PO = 22.010 Q(PSI) = 7.3870 RN/L = 6.2700 P = 12.998

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.1021
.018	.8369
.020	.5358
.022	.6166
.025	.6417
.028	.6335
.030	.6295
.036	.6701
.039	.7224
.041	.7537
.044	.7100
.049	.6530
.058	.5088
.068	.3901
.077	.2961
.085	.2494
.093	.2010
.106	.0449
.118	.0175
.131	-.0941
.167	-.3787
.185	-.4892

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 508

MSFC TWT 603 (TA3F) ET NOSE WITH NOSE CAP

(RIG102)

MACH (4) = 1.199 ALPHA (1) = -3.060 PO = 22.005 Q(PSI) = 9.1420 RN/L = 6.6700 P = 9.0910

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.2919
.018	1.0365
.020	.7508
.022	.8208
.025	.8511
.028	.8435
.030	.8346
.036	.8879
.039	.9357
.041	.9598
.044	.9247
.049	.8739
.058	.7377
.068	.6352
.077	.5507
.085	.5080
.093	.4727
.106	.3328
.118	.3053
.131	.2200
.167	-.0326
.185	-.1163

MACH (5) = 1.457 ALPHA (1) = -3.060 PO = 22.018 Q(PSI) = 9.4820 RN/L = 6.5100 P = 6.3830

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	3770
.018	6687
.020	6564
.022	6225
.025	7564
.028	8008
.030	.8078
.036	9701
.039	1 0350
.041	1 0635
.044	1 0077
.049	9387
.058	.7760
.068	6658
.077	5859

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10102)

MACH (5) = 1.457 ALPHA (1) = -3.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	.5459
.093	.5271
.106	.3778
.118	.3615
.131	.2750
.167	.0425
.185	-.0235

MACH (6) = 1.958 ALPHA (1) = -3.060 P0 = 28.011 Q(PSI) = 10.252 RN/L = 6.9700 P = 3.8190

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.2943
.018	.6668
.020	.7126
.022	.2582
.025	.3474
.028	.3764
.030	.3619
.036	.4797
.039	.6771
.041	.8486
.044	.9102
.049	.8699
.058	.8040
.068	.6625
.077	.6130
.085	.5654
.093	.5194
.106	.4028
.118	.4068
.131	.2984
.167	.1014
.185	.0511

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G102)

MACH (7) = 4.960 ALPHA (1) = -3.030 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4 0800 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	2775
018	2639
020	9745
022	.2442
025	2140
028	.2201
030	2775
.036	2140
039	3667
041	1 0410
044	9306
.049	1 0002
058	6812
068	6026
077	5406
.085	5179
.093	4695
.106	3743
.118	4151
.131	.2715
.157	.2503
185	1067

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10103) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. X₁
LREF = 330 2000 IN. YMRP = .0000 IN. Y_T
BREF = 330 2000 IN. ZMRP = .0000 IN. Z_T
SCALE = .0091

BETA = .000 THETA = 270.000
PHI = .000

MACH (1) = .595 ALPHA (1) = -2.060 PO = 22.001 Q(PSI) = 4.2950 RN/L = 4.9700 P = 17.312

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.9844
.018	.7235
.020	.4064
.022	.5071
.025	.5129
.028	.4937
.030	.5016
.036	.6283
.039	.6727
.041	.6620
.044	.6076
.049	.5377
.058	.3971
.068	.2929
.077	.1977
.085	.1521
.093	.1162
.106	-.0243
.118	-.0522
.131	-.1380
.167	-.3630
.185	-.4121

MACH (2) = .800 ALPHA (1) = -2.050 PO = 22.005 Q(PSI) = 6.4720 RN/L = 5.9600 P = 14.429

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.10687
.018	.7940
.020	.4690
.022	.5554
.025	.5716
.028	.5592
.030	.5683
.036	.6937

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16103)

MACH (2) = .800 ALPHA (1) = -2.050

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.039	7403
.041	.7367
.044	6775
.049	.6076
.058	4668
.068	3503
.077	2538
.085	2058
.093	1637
.106	.0052
.118	-.0258
.131	- 1286
.167	-.4122
.185	-.4977

MACH (3) = 899 ALPHA (1) = -2.060 PO = 21 997 Q(PSI) = 7 3700 RN/L = 6.2700 P = 13.013

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016	1 1113
.018	.8492
.020	.5127
.022	.6116
.025	.6180
.028	.6069
.030	.6162
.036	.7419
.039	.7863
.041	.7795
.044	7235
.049	6543
.058	.5104
.068	.3965
.077	.3001
.085	.2514
.093	.2086
.106	0497
.118	0163
.131	-.0900
.167	- 3798
.185	- 4890

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG103)

MACH (4) = 1.199 ALPHA (1) = -2.060 PO = 22.001 Q(PS1) = 9.1400 RN/L = 6.6700 P = 9.0890

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.2984
.018	1.0582
.020	.7245
.022	.7874
.025	.8191
.028	.8168
.030	.8280
.036	.9507
.039	.9996
.041	.9919
.044	.9359
.049	.8747
.058	.7408
.068	.6389
.077	.5569
.085	.5097
.093	.4774
.106	.3393
.118	.3065
.131	.2232
.167	-.0304
.185	-.1151

MACH (5) = 1.457 ALPHA (1) = -2.040 PO = 22.005 Q(PS1) = 9.4760 RN/L = 6.5000 P = 6.3750

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.3762
.018	.6332
.020	.6592
.022	.6532
.025	.7760
.028	.8172
.030	.8290
.036	.9516
.039	1.0160
.041	1.0542
.044	1.0121
.049	.9486
.058	.7854
.068	.6727
.077	.5907

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 514

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16103)

MACH (5) = 1.457 ALPHA (1) = -2.040

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	5500
.093	5322
.106	3796
.118	.3684
.131	.2786
.167	.0473
.185	-.0236

MACH (6) = 1.958 ALPHA (1) = -2.060 PO = 28.003 Q(PSI) = 10 250 RN/L = 6 9700 P = 3 8190

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	2833
.018	5973
.020	.6895
.022	2486
.025	.3510
.028	.3835
.030	3694
.036	.4804
.039	6779
.041	.8467
.044	.9137
.049	8793
.058	.8199
.068	6705
.077	.6250
.085	5699
.093	.5611
.106	.4066
.118	.4091
.131	.3008
.167	1017
.185	.0519

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 515

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G103)

MACH (7) = 4.960 ALPHA (1) = -2.060 PO = 75.028 Q(PSI) = 2 5590 RN/L = 4.0400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016	.2760
.018	2 8930
.020	1 0380
.022	3108
.025	.2508
.028	.2805
.030	2926
.036	.2547
.039	.7568
.041	8127
.044	1.0164
.049	1.3509
.058	6721
.068	.6008
.077	.7885
.085	.5118
.093	4754
.106	.5466
.118	4105
.131	2744
.167	.2170
.185	.1066

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 515

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G104) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN XMRP = 0000 IN XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = 0000 IN ZT
SCALE = .0091

PARAMETRIC DATA

BETA = 000 THETA = 270 000
PHI = .000

MACH (1) = 596 ALPHA (1) = -1.060 PO = 22.005 Q(PSI) = 4.3040 RN/L = 4.9800 P = 17.305

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 9546
.018 7237
.020 3770
.022 .4100
.025 .4595
.028 4803
.030 .5351
.036 7149
.039 .7453
.041 6941
.044 .6115
.049 5378
.058 3995
.068 2886
.077 .2037
.085 .1552
.093 .1168
.106 - .0199
.118 -.0468
.131 - .1395
.167 - .3576
.185 -.4174

MACH (2) = 800 PHA (1) = -1.060 PO = 22.005 Q(PSI) = 6.4650 RN/L = 5.9600 P = 14.439

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016 1 0270
.018 .7942
.020 4355
.022 .4620
.025 5332
.038 5526
.030 .5979
.036 7762

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG104)

MACH (2) = .800 ALPHA (1) = -1.060

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.039	.8102
.041	.7631
.044	.6805
.049	.6052
.058	.4644
.068	.3489
.077	.2568
.085	.2058
.093	.1563
.106	.0094
.118	-.0246
.131	-.1287
.167	-.4130
.185	-.5010

MACH (3) = .899 ALPHA (1) = -1.040 PO = 22.001 Q(PSI) = 7.3650 RN/L = 6.2700 P = 13.025

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.0754
.018	.8498
.020	.4767
.022	.4772
.025	.5808
.028	.6017
.030	.6483
.036	.8134
.039	.8533
.041	.8091
.044	.7262
.049	.6521
.058	.5123
.068	.3945
.077	.3007
.085	.2528
.093	.2107
.106	.0523
.118	.0207
.131	-.0879
.167	-.3747
.185	-.4884

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G104)

MACH (4) = 1.197 ALPHA (1) = -1.060 PO = 22.010 Q(PSI) = 9.1380 RN/L = 6 6800 P = 9.1110

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.2275
.018	1.0438
.020	.7080
.022	.6994
.025	.8033
.028	.8342
.030	.8649
.036	1.0086
.039	1.0470
.041	1.0117
.044	.9392
.049	.8731
.058	.7426
.068	.6394
.077	.5565
.085	.5124
.093	.4806
.106	.3398
.118	.3114
.131	.2249
.167	- .0278
.185	-.1180

MACH (5) = 1.458 ALPHA (1) = -1.040 PO = 22.018 Q(PSI) = 9.4810 RN/L = 6.5200 P = 6.3730

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.3796
.018	.6251
.020	.6662
.022	.6761
.025	.7923
.028	.8311
.030	.8452
.036	.9404
.039	1.0030
.041	1.0414
.044	1.0122
.049	.9532
.058	.7922
.068	.6781
.077	.5956

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G104)

MACH (5) = 1.458 ALPHA (1) = -1.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	.5521
.093	.5349
.106	.3829
.118	.3698
.131	.2819
.167	.0490
.185	-.0199

MACH (6) = 1.958 ALPHA (1) = -1.060 PO = 28.007 Q(PSI) = 10.251 RN/L = 6.9700 P = 3.8190

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.2806
.018	.5364
.020	.6668
.022	.2402
.025	.3544
.028	.3884
.030	.3799
.036	.4762
.039	.6691
.041	.8426
.044	.9133
.049	.8829
.058	.8305
.068	.6770
.077	.6268
.085	.5743
.093	.5628
.106	.4077
.118	.4135
.131	.3013
.167	.1055
.185	.0496

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10104)

MACH (7) = 4.960 ALPHA (1) = -1.040 PO = 75.003 Q(PSI) = 2.5580 RN/L = 4.2300 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

016	2503
018	2548
020	.7008
.022	.3033
025	2974
028	2987
030	.3032
036	2959
039	3032
.041	5466
.044	1 0342
.049	1 0531
058	.6479
.068	.5969
.077	.5330
085	.4952
.093	.4668
.106	3682
118	.3259
.131	.2687
167	.1702
185	.1340

1
2
3

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TABULATED SOURCE DATA. MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G105) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = 270.000
PHI = .000

MACH (1) = .595 ALPHA (1) = -.040 PO = 22.001 Q(PS1) = 4.2910 RN/L = 4.9700 P = 17.317

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 .8921
.018 .7071
.020 .3623
.022 .3398
.025 .4726
.028 .5467
.030 .5923
.036 .7586
.039 .7599
.041 .6943
.044 .6125
.049 .5332
.058 .4017
.068 .2913
.077 .2004
.085 .1570
.093 .1235
.106 -.0207
.118 -.0452
.131 -.1335
.167 -.3567
.185 -.4131

MACH (2) = .800 ALPHA (1) = -.040 PO = 22.014 Q(PS1) = 6.4650 RN/L = 5.9800 P = 14.449

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 .9826
.018 .7827
.020 .4193
.022 .4269
.025 .5338
.028 .6035
.030 .6540
.036 .8223

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G105)

MACH (2) = .800 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.039	.8314
.041	.7644
.044	.6759
.049	.5987
.058	.4634
.068	.3510
.077	.2530
.085	.2038
.093	.1695
.106	.0053
.118	-.0233
.131	-.1255
.167	-.4100
.185	-.4994

MACH (3) = .900 ALPHA (1) = -.040 PO = 21.997 Q(PS1) = 7.3730 RN/L = 6.2800 P = 13 008

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.9988
.018	.8389
.020	.4692
.022	.4770
.025	.6056
.028	.6570
.030	.6928
.036	.8516
.039	.8716
.041	.8137
.044	.7255
.049	.6481
.058	.5119
.068	.3373
.077	.3013
.085	.2521
.093	.2152
.106	.0532
.118	.0217
.131	-.0857
.167	-.3736
.185	-.4845

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG105)

MACH (4) = 1.196 ALPHA (1) = -.040 PO = 22.001 Q(PSI) = 9.1310 RN/L = 6.6900 P = 9.1210

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

016 1.1628
018 1.0524
020 .6982
022 .7235
025 .8333
028 .8702
030 .8954
036 1.0319
039 1.0558
041 1.0161
044 .9400
049 .8689
058 7437
068 .6402
077 5550
085 5127
093 4836
106 3390
118 3127
131 2278
167 -.0270
185 -.1176

MACH (5) = 1.457 ALPHA (1) = -.040 PO = 22.022 Q(PSI) = 9.4830 RN/L = 6.5200 P = 6.3800

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

016 3923
018 6395
020 .6695
022 6797
025 .7963
028 8364
030 8473
036 9281
039 1.0008
041 1.0348
044 1.0134
049 9526
058 7971
068 6780
077 5977

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10105)

MACH (5) = 1.457 ALPHA (1) = -0.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	.5541
.093	.5361
.106	.3855
.118	.3719
.131	.2823
.167	.0498
.185	-.0231

MACH (6) = 1.964 ALPHA (1) = -.040 PO = 27.999 Q(PSI) = 10.215 RN/L = 6.9500 P = 3.7820

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.2771
.018	.5563
.020	.6592
.022	.2323
.025	.3490
.028	.3855
.030	.3752
.036	.4580
.039	.6622
.041	.8319
.044	.9080
.049	.8841
.058	.8182
.068	.6798
.077	.6176
.085	.5848
.093	.5473
.106	.4078
.118	.4002
.131	.3044
.167	.0963
.185	.0550

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG105)

MACH (7) = 4 960 ALPHA (1) = - 040 PO = 75 028 Q(PSI) = 2 5590 RN/L = 4.1200 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.2804
.018	.2563
.020	.6328
.022	.3591
.025	.3259
.028	.3244
.030	.3409
.036	.3244
.039	.3213
.041	.4361
.044	.9654
.049	1.0380
.058	.6734
.068	.6056
.077	.5360
.085	.5117
.093	.4756
.106	.3712
.118	.3651
.131	.2699
.167	.2094
.185	.1127

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G106) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ.IN. XMRP = .0000 IN. XT
 LREF = 330.2000 IN YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

BETA = .000 THETA = 270.000
 PHI = .000

MACH (1) = 596 ALPHA (1) = .960 PO = 22.005 Q(PS1) = 4.3040 RN/L = 4.9800 P = 17.305

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 .9452
 .018 .7194
 .020 .3716
 .022 .4425
 .025 .4514
 .028 .4890
 .030 .5526
 .036 .7752
 .039 .7533
 .041 .7012
 .044 .6115
 .049 .5347
 .058 .4059
 .068 .2922
 .077 .2032
 .085 .1610
 .093 .1231
 .106 -.0189
 .118 -.0406
 .131 -.1341
 .167 -.3486
 .185 -.4129

MACH (2) = .799 ALPHA (1) = .960 PO = 21.993 Q(PS1) = 6.4580 RN/L = 5.9400 P = 14.436

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 1.0031
 .018 .7960
 .020 .4367
 .022 .5028
 .025 .5286
 .028 .5768
 .030 .6318
 .036 .8271

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G106)

MACH (2) = .799 ALPHA (1) = .960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.039	.8132
.041	.7599
.044	.6761
.049	.6031
.058	.4658
.068	.3488
.077	.2548
.085	.2047
.093	.1671
.106	.0088
.118	-.0240
.131	-.1301
.167	-.4050
.185	-.5041

MACH (3) = .900 ALPHA (1) = .950 PC = 22.005 Q(PS1) = 7.3800 RN/L = 6 2600 P = 13.005

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.0048
.018	.8464
.020	.4895
.022	.5445
.025	.5896
.028	.6389
.030	.6828
.036	.8522
.039	.8621
.041	.8129
.044	.7285
.049	.6515
.058	.5182
.068	.4015
.077	.3077
.085	.2576
.093	.2186
.106	.0578
.118	.0274
.131	-.0826
.167	-.3647
.185	-.4850

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G106)

MACH (4) = 1.203 ALPHA (1) = .960 PO = 21.997 Q(PSI) = 9.1530 RN/L = 6.6600 P = 9.0360

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.2020
.018	1.0566
.020	.7070
.022	.7444
.025	.8021
.028	.8400
.030	.8698
.036	1.0297
.039	1.0507
.041	1.0110
.044	.9383
.049	.8687
.058	.7443
.068	.6397
.077	.5571
.085	.5107
.093	.4836
.106	.3392
.118	.3121
.131	.2273
.167	-.0246
.185	-.1194

MACH (5) = 1.459 ALPHA (1) = .960 PO = 22.018 Q(PSI) = 9.4800 RN/L = 6.5200 P = 6.3630

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.4108
.018	.6339
.020	.6601
.022	.6679
.025	.7805
.028	.8229
.030	.8376
.036	.9261
.039	1.0126
.041	1.0494
.044	1.0224
.049	.9474
.058	.7988
.068	.6793
.077	.5961

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10106)

MACH (5) = 1.459 ALPHA (1) = 960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	.5553
.093	.5393
.106	.3851
.118	.3745
.131	.2848
.167	.0526
.185	-.0191

MACH (6) = 1.957 ALPHA (1) = .960 PO = 28.015 Q(PSI) = 10 263 RN/L = 7.0400 P. = 3.8290

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016	.2857
.018	.5803
.020	.6576
.022	.2166
.025	.3417
.028	.3845
.030	.3743
.036	.4808
.039	.6956
.041	.8531
.044	.9215
.049	.8900
.058	.8320
.068	.6851
.077	.6297
.085	.5775
.093	.5589
.106	.4078
.118	.4112
.131	.3037
.167	.1020
.185	.0522

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TABULATED SOURCE DATA, MSFC TWT 809 (TA3F)

PAGE 530

MSFC TWT 809 (TA3F) ET NOSE WITH NOSE CAP

(RIG106)

MACH (7) = 4.960 ALPHA (1) = .960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.0700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.3123
.018	.2473
.020	.6555
.022	.3259
.025	3093
.028	3077
.030	.3637
.036	3093
.039	3047
.041	.5254
.044	1.0470
.049	1.0637
.058	.6842
.068	6026
.077	5375
.085	5239
.093	4740
.106	.3743
.118	.4619
.131	.2745
.167	.2654
.185	.1127

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG107) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN XMRP = 0000 IN XT
LREF = 330 2000 IN YMRP = 0000 IN YT
BREF = 330 2000 IN ZMRP = 0000 IN ZT
SCALE = 0091

BETA = .000 THETA = 270.000
PHI = .000

MACH (1) = .595 ALPHA (1) = 1.960 PO = 22.001 Q(PSI) = 4.2910 RN/L = 4.9500 P = 17.317

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 .9857
.018 .7157
.020 .4051
.022 .5071
.025 .4872
.028 .4729
.030 .4829
.036 .6926
.039 .7080
.041 .6834
.044 .6178
.049 .5416
.058 .4046
.068 .2954
.077 .2043
.085 .1582
.093 .1251
.106 - .0189
.118 - .0441
.131 - .1333
.167 - .3482
.185 - .4153

MACH (2) = 800 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 6.4620 RN/L = 5.9400 P = 14.444

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 1.0707
.018 .7950
.020 .4590
.022 .5644
.025 .5506
.028 .5356
.030 .5614
.036 .7163

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 532

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R19107)

MACH (2) = .800 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.039	.7655
.041	.7487
.044	.6781
.049	.6027
.058	.4680
.068	.3501
.077	.2549
.085	.2046
.093	.1681
.106	.0053
.118	-.0246
.131	-.1305
.167	-.4053
.185	-.5082

MACH (3) = .899 ALPHA (1) = 1.960 PO = 22.001 Q(PSI) = 7.3670 RN/L = 6.2400 P = 13.023

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.1182
.018	.8472
.020	.5086
.022	.6118
.025	.5996
.028	.5890
.030	.6119
.036	.7976
.039	.8133
.041	.7955
.044	.7314
.049	.6547
.058	.5201
.068	.4021
.077	.3064
.085	.2557
.093	.2177
.106	.0553
.118	-.0233
.131	-.0858
.167	-.3691
.185	-.4945

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G107)

MACH (4) = 1.200 ALPHA (1) = 1.970 PO = 22.005 Q(PSI) = 9.1480 RN/L = 6.6600 P = 9.0710

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.3020
.018	1.0450
.020	.7322
.022	.8054
.025	8143
.028	7995
.030	8054
.036	9546
.039	9935
.041	.9936
.044	.9411
.049	.8735
.058	.7462
.068	.6397
.077	.5572
.095	.5105
.093	4821
.106	3373
.118	.3113
.131	2255
.167	-.0224
.185	-.1222

MACH (5) = 1.455 ALPHA (1) = 1.960 PO = 22.026 Q(PSI) = 9.4860 RN/L = 6.5200 P = 6.4050

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.4023
.018	6457
.020	.6625
.022	6478
.025	7653
.028	8192
.030	.8264
.036	.9308
.039	1.0445
.041	1.0664
.044	1.0225
.049	.9392
.058	.7963
.068	6728
.077	5943

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 534

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG107)

MACH (5) = 1.455 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	.5522
.093	.5378
.106	.3870
.118	.3725
.131	.2781
.167	.0506
.185	-.0251

MACH (6) = 1.958 ALPHA (1) = 1.960 PO = 28.011 Q(PSI) = 10.252 RN/L = 7.0200 P = 3.8190

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.2669
.018	.6268
.020	.6728
.022	.2166
.025	.3246
.028	.3759
.030	.3527
.036	.4921
.039	.7241
.041	.8525
.044	.9183
.049	.8933
.058	.8200
.068	.6746
.077	.6310
.085	.5718
.093	.5581
.106	.4098
.118	.3901
.131	.3012
.167	.0980
.185	.0504

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG107)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.036 Q(PSI) = 2.5590 RN/L = 4.0400 P = .14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.2925
.018	.2518
.020	.7323
.022	.3093
.025	.2715
.028	.2729
.030	.3182
.036	.2745
.039	.2986
.041	.7535
.044	1.0304
.049	1.0860
.058	.6643
.068	.5950
.077	.5373
.085	.5147
.093	.4725
.106	.3726
.118	.5207
.131	.2745
.167	.2411
.185	.1112

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG108) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ. IN. XMRP = 0000 IN. XT
LREF = 330 2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = 270 000
PHI = .000

MACH (1) = 595 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 4.2960 RN/L = 4.9600 P = 17.315

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 .9715
.018 .7087
.020 .4237
.022 .5194
.025 .5196
.028 .5073
.030 .4835
.036 .5845
.039 .6402
.041 .6639
.044 .6178
.049 .5450
.058 .4068
.068 .2935
.077 .2046
.085 .1578
.093 .1242
.106 - .0226
.118 - .0460
.131 - .1378
.167 - .3490
.185 -.4243

MACH (2) = .799 ALPHA (1) = 2.980 PO = 22.001 Q(PSI) = 6.4610 RN/L = 5.9400 P = 14.441

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016 1.0509
.018 .7904
.020 .4814
.022 .5825
.025 .5825
.028 .5665
.030 .5503
.036 .6477

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (T F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16108)

MACH (2) = .799 ALPHA (1) = 2 980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.039	.7108
.041	.7308
.044	.6829
.049	.6090
.058	.4694
.068	.3476
.077	.2526
.085	.2032
.093	.1689
.106	.0022
.118	-.0257
.131	-.1304
.167	-.4046
.185	-.5099

MACH (3) = .897 ALPHA (1) = 2 980 PO = 21.997 Q(PSI) = 7.3510 RN/L = 6.2400 P = 13 045

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016	1.1037
.018	.8365
.020	.5274
.022	.6239
.025	.6302
.028	.6148
.030	.5999
.036	.6975
.039	.7612
.041	.7781
.044	.7359
.049	.6574
.058	.5189
.068	.3981
.077	.3041
.085	.2512
.093	.2181
.106	.0519
.118	.0198
.131	-.0875
.167	-.3738
.185	-.4964

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G108)

MACH (4) = 1.198 ALPHA (1) = 2.980 PO = 22.001 Q(PSI) = 9.1380 RN/L = 6.6600 P = 9.0960

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

016	1.2871
018	1.0332
020	.7444
022	.8333
025	.8413
028	.8295
.033	.8157
036	.8828
039	.9421
041	.9754
044	.9454
049	.8761
.058	.7475
068	.6374
077	.5531
085	.5099
093	.4822
106	.3343
118	.3121
131	.2250
.167	-.0215
.185	-.1256

MACH (4) = 1.451 ALPHA (1) = 2.980 PO = 22.005 Q(PSI) = 9.4790 RN/L = 6.5100 P = 6.4280

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.3997
018	.7217
020	.6555
022	.6233
025	.7553
.028	.7372
030	.8183
036	.9432
039	1.0567
041	1.0774
044	1.0207
049	.9269
058	.7902
068	.6686
.077	.5915

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G108)

MACH (5) = 1.451 ALPHA (1) = 2.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

085	5494
093	5388
.106	3841
.118	.3654
.131	.2736
.157	0578
.185	- 0307

MACH (6) = 1.956 ALPHA (1) = 2.980 PO = 28.015 Q(PSI) = 10.267 RN/L = 7.0300 P = 3.8340

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.2862
.018	6912
.020	6929
.022	2342
.025	3249
.028	3688
.030	.3604
.036	.5066
.039	.7200
.041	8738
.044	.9368
.049	8906
.058	.8196
.068	6801
.077	6270
.085	5736
.093	5745
.106	4068
.118	4090
.131	3075
.157	.1132
.185	0485

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G108)

MACH (7) = 4.960 ALPHA (1) = 2.980 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.2200 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.2412
.018	.2639
.020	.8747
.022	.1990
.025	.2337
.029	.2352
.030	.2458
.036	.2337
.039	.3470
.041	1.0077
.044	.9850
.049	1.0365
.058	.6509
.068	.5995
.077	.5421
.085	.4982
.093	.4740
.106	.3758
.118	.3289
.131	.2730
.167	.1732
.185	.1369

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG109) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ.IN. XMRP = 0000 IN XT
LREF = 330 2000 IN. YMRP = 0000 IN YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BETA = 000 THETA = 270 000
PHI = .000

MACH (') = 594 ALPHA (1) = 3 960 PO = 21.997 Q(PS1) = 4.2850 RN/L = 4.9500 P = 17.320

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016 9535
.018 7069
.020 4180
.022 5115
.025 .5195
.028 5083
.030 .4812
.036 .5385
.039 .6473
.041 6853
.044 6242
.049 5336
.058 4026
.068 2877
.077 .1967
.085 .1525
.093 .1199
.106 - 0298
.118 - 0470
.131 - 1407
.167 -.3513
.185 - 4293

MACH (2) = .797 ALPHA (1) = 3 960 PO = 22.005 Q(PS1) = 6.4380 RN/L = 5.9400 P = 14.479

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016 1 0341
.018 7799
.020 4778
.022 5745
.025 5803
.028 5718
.030 5467
.036 5014

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G109)

MACH (2) = 797 ALPHA (1) = 3.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.039	.6997
.041	.7476
.044	.6916
.049	.6017
.058	.4640
.068	.3404
.077	.2468
.085	.1996
.093	.1630
.106	-.0015
.118	-.0275
.131	-.1376
.167	-.4058
.185	-.5176

MACH (3) = 894 ALPHA (1) = 3.960 PO = 22.001 Q(PSI) = 7.3260 RN/L = 6.2400 P = 13.090

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016	.0824
.018	.8373
.020	.5255
.022	.6310
.025	.6290
.028	.6169
.030	.5934
.036	.6559
.039	.7453
.041	.7870
.044	.7420
.049	.6497
.058	.5111
.068	.3934
.077	.2942
.085	.2442
.093	.2138
.106	.0454
.118	.0152
.131	-.0919
.167	-.3745
.185	-.5028

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG109)

MACH (4) = 1.194 ALPHA (1) = 3.960 PO = 22.005 Q(PS1) = 9.1260 RN/L = 6.6600 P = 9.1490

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016	1.2682
.018	1.0252
.020	.7399
.022	.8267
.025	.8334
.028	.8277
.030	.8054
.036	.8554
.039	.9430
.041	.9872
.044	.9448
.049	.8671
.058	.7405
.068	.6303
.077	.5474
.085	.5049
.093	.4773
.106	.3291
.118	.3087
.131	.2201
.167	-.0252
.185	-.1337

MACH (5) = 1.458 ALPHA (1) = 3.960 PO = 22.014 Q(PS1) = 9.4790 RN/L = 6.5100 P = 6.3700

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016	.4614
.018	.7424
.020	.6597
.022	.5898
.025	.7111
.028	.7711
.030	.7850
.036	.9474
.039	1.0722
.041	1.0718
.044	1.0087
.049	.9135
.058	.7870
.068	.6670
.077	.5891

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE JAP

(R16109)

MACH (5) = 1.458 ALPHA (1) = 3.960

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	.5483
.093	.5372
.106	.3819
.118	.3668
.131	.2808
.167	.0518
.185	-.0260

MACH (6) = 1.951 ALPHA (1) = 3.960 PO = 28.024 Q(PS1) = 10.299 RN/L = 7.0500 P = 3.8670

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.2859
.018	.7750
.020	.7204
.022	.2990
.025	.33
.028	.3735
.030	.3598
.036	.1963
.039	.7159
.041	.8802
.044	.9441
.049	.8933
.058	.8153
.068	.6800
.077	.6298
.085	.5812
.093	.5725
.106	.4066
.118	.4026
.131	.3073
.167	.1186
.185	.0435

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G109)

MACH (7) = 4.960 ALPHA (1) = 3.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1300 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	2760
.018	.2820
.020	1.0349
.022	.2170
.025	.1959
.028	.2019
.030	2654
.036	2080
.039	5753
.041	9533
.044	.8460
.049	.9170
.058	.7084
.068	.6056
.077	.5375
.085	.5103
.093	.4665
.106	.3758
.118	.4090
.131	.2715
.167	.2473
.185	.1172

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) E1 NOSE WITH NOSE CAP

(R10110) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. \sqrt{YRP} = .0000 IN. XT
LREF = 330 2000 IN. YRP = .0000 IN. YT
BREF = 330 2000 IN. ZMP = .0000 IN. ZT
SCALE = .0091

BETA = .000 THETA = 270.000
PHI = .000

MACH (1) = .595 ALPHA (1) = 4.980 PO = 22.005 Q(PS1) = 4.2940 RN/L = 4.9600 P = 17.317

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.9349
.018	.6779
.020	.4070
.022	.4813
.025	.4980
.028	.4854
.030	.4296
.036	.5368
.039	.6791
.041	.6737
.044	.5989
.049	.5169
.058	.3935
.068	.2800
.077	.1873
.085	.1449
.093	.1125
.106	-.0351
.118	-.0531
.131	-.1486
.167	-.3540
.185	-.4378

MACH (2) = .802 ALPHA (1) = 4.980 PO = 21.997 Q(PS1) = 6.4860 RN/L = 5.9600 P = 14.399

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.0164
.018	.7692
.020	.4772
.022	.5538
.025	.5663
.028	.5524
.030	.5018
.036	.5938

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10110)

MACH (2) = .802 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

039	7357
.041	.7415
.044	.6726
049	5907
058	4548
058	.3371
077	2444
.085	.1918
.093	.1609
.106	-.0039
.118	-.0341
.131	-.1399
.167	-.4119
.185	-.5262

MACH (3) = .902 ALPHA (1) = 4.980 P0 = 22.005 Q(PS1) = 7.3900 RN/L = 6.2600 P = 12.988

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270 0000

X/L

.016	1 0709
.018	8258
.020	.5207
.022	.6106
.025	.6168
.029	.5977
.030	.5546
.036	.6430
.039	7763
.041	7934
.044	7256
.049	6380
.058	.5096
.069	3894
.077	2913
.085	2456
.093	2133
.106	0452
.118	0168
.131	- 0919
.167	-.3706
.185	- 5075

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G110)

MACH (4) = 1.189 ALPHA (1) = 4.980 PO = 22.005 Q(PSI) = 9.1090 RN/L = 6.6700 P = 9.2060

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	1.2502
.018	1.0177
.020	.7286
.022	.8156
.025	.8173
.028	.8012
.030	.7706
.036	.8577
.039	.9762
.041	.9867
.044	.9256
.049	.8492
.058	.7333
.068	.6254
.077	.5408
.085	.4994
.093	.4729
.106	.3233
.118	.5928
.131	.2152
.167	-.0302
.185	-.1427

MACH (5) = 1.456 ALPHA (1) = 4.980 PO = 22.014 Q(PSI) = 9.4800 RN/L = 6.5200 P = 6.3850

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.4800
.018	.8715
.020	.6622
.022	.5898
.025	.6870
.028	.7539
.030	.7804
.036	.9732
.039	1.0850
.041	1.0637
.044	1.0230
.049	.8995
.058	.7821
.068	.7719
.077	.5851

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10'10)

MACH (5) = 1.456 ALPHA (1) = 4.980

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.085	.5454
.093	.5384
.106	.3837
.118	.3674
.131	.2788
.167	.0531
.185	-.0285

MACH (6) = 1.954 ALPHA (1) = 4.960 PO = 28.011 Q(PSI) = 10.277 RN/L = 7.0400 P = 3.8470

SECTION (1)EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 270.0000

X/L

.016	.3088
.018	.8465
.020	.7505
.022	.3152
.025	.3421
.028	.3673
.030	.3535
.036	.4750
.039	.6993
.041	.8761
.044	.9432
.049	.8936
.058	.8178
.068	.6741
.077	.6259
.085	.5823
.093	.5717
.106	.4061
.118	.4047
.131	.3052
.167	.1218
.185	.0413

ORIGINAL PAGE IS
OF POOR QUALITY

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 550

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G110)

MACH (7) = 4.960 ALPHA (1) = 4.980 PO = 75.028 Q(PS1) = 2.5590 RN/L = 4.0700 P = .14900

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 270 0000

X/L

016	2503
018	3138
020	1 0754
022	.2185
025	1611
028	.1686
030	2291
036	2216
039	.4814
.041	.7855
.044	8006
.049	9001
.058	.7054
.068	.6010
.077	5343
.085	5028
.093	.4635
.106	.3696
.118	.3954
.131	.2684
.167	.2291
.185	.1097

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 551

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G111) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ IN. XMRP = 0000 IN. XT
LREF = 330 2000 IN. YMRP = 0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = .000
PHI = .000

MACH (1) = 2.990 ALPHA (1) = -.040 PO = 59.674 Q(PSI) = 10.319 RN/L = 8.3200 P = 1.6490

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1861
.018 .5460
.020 .8143
.022 .1197
.025 .2093
.028 .2505
.030 .2379
.036 .3313
.039 .5816
.041 .8382
.044 .8723
.049 .8412
.058 .7234
.068 .6052
.077 .5464
.085 .5125
.093 .4907
.106 .3785
.118 .3485
.131 .2716
.167 .1189
.185 .0739

MACH (2) = 4.000 ALPHA (1) = -.040 PO = 74.986 Q(PSI) = 5.5310 RN/L = 6.4600 P = .49400

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 2617
.018 2665
.020 7267
.022 1980
.025 1975
.028 1834
.030 1533
.036 2653

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 552

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10111)

MACH (2) = 4.000 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	7372
.041	1 1015
.044	.9942
.049	9575
.058	6883
.068	5948
.077	5281
.085	4932
.093	4696
.106	3673
.118	.3267
.131	.2660
.167	1295
.185	.0911

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 553

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G112) (29 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN XMRP = .0000 IN XT
LREF = 330 2000 IN YMRP = .0000 IN YT
BREF = 330 2000 IN ZMRP = .0000 IN ZT
SCALE = .0091

BETA = .000 THETA = .000
PHI = .000

MACH (1) = 1.946 ALPHA (1) = 9.860 PO = 28.015 Q(PSI) = 10.321 RN/L = 7.0900 P = 3.8940

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .1959
.018 .2537
.020 .2493
.022 .2934
.025 .3560
.028 .3545
.030 .3547
.036 .3605
.039 .3788
.041 .4008
.044 .4328
.049 .4548
.058 .4549
.068 .4310
.077 .3885
.085 .3596
.093 .3440
.106 .2471
.118 .2199
.131 .1454
.167 .0007
.195 .0564

MACH (2) = 2.990 ALPHA (1) = 9.880 PO = 60.007 Q(PSI) = 10.377 RN/L = 8.2200 P = 1.6580

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .2419
.018 .2840
.020 .2283
.022 .1137
.025 .1595
.028 .1768
.030 .1827
.036 .1942

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 554

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10112)

MACH (2) = 2.990 ALPHA (1) = 9.880

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.2208
.041	.2509
.044	.2878
.049	.3178
.058	.3552
.068	.3306
.077	.3122
.085	.2937
.093	.2766
.106	.1940
.118	.1681
.131	.1156
.167	.0187
.185	-.0163

MACH (3) = 4.000 ALPHA (1) = 9.860 PO = 75.019 Q(PSI) = 5.5330 RN/L = 6.2800 P = .49400

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.2588
.018	.2944
.020	.2308
.022	.1148
.025	.1295
.028	.1371
.030	.1658
.036	.1581
.039	.2071
.041	.2846
.044	.2993
.049	.3280
.058	.3972
.068	.3650
.077	.3224
.085	.3042
.093	.2595
.106	.1861
.118	.2078
.131	.1302
.167	.1036
.185	.0330

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 555

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G112)

MACH (4) = 4.960 ALPHA (1) = 9.880 PO = 75.019 Q(PST) = 2.5580 RN/L = 4.1900 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	.3047
.018	.3261
.020	.2427
.022	.1460
.025	.1460
.028	.1399
.030	.2291
.036	.1430
.039	.1671
.041	.3138
.044	.2654
.049	.3108
.052	.4453
.068	.3864
.077	.3274
.085	.3229
.093	.2473
.106	.1913
.118	.2926
.131	.1369
.167	.2125
.185	.0598

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 556

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G113) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN. XMRP = 0000 IN. XT
LREF = 330 2000 IN. YMRP = 0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = .000
PHI = .000

MACH (1) = 1.961 ALPHA (1) = -9.960 PO = 28.011 Q(PS1) = 10.236 RN/L = 7.0300 P = 3.8020

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 2.0643
.018 1.6363
.020 .9414
.022 4.320
.025 3.558
.028 4.326
.030 3.595
.036 1.0015
.039 1.5042
.041 1.3871
.044 1.2937
.049 1.2013
.058 1.0432
.068 .9173
.077 .8662
.085 .8162
.093 .8153
.106 .6362
.118 .6310
.131 .5322
.167 .3069
.185 .2241

MACH (2) = 2.990 ALPHA (1) = -9.950 PO = 60.007 Q(PS1) = 10.377 RN/L = 8.1200 P = 1.6580

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 2.7126
.018 1.7088
.020 .8870
.022 3.265
.025 .3459
.028 .3858
.030 .3808
.036 .7067

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 557

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10113)

MACH (2) = 2.990 ALPHA (1) = -9.950

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.039	1.0745
.041	1.2406
.044	1.3071
.049	1.3350
.058	.9952
.068	.8405
.077	.8095
.085	.7835
.093	.7629
.106	.6321
.118	.6134
.131	.5136
.167	.3002
.185	.2367

MACH (3) = 4.000 ALPHA (1) = -9.940 PO = 75.011 Q(PSI) = 5.5330 RN/L = 6.1800 P = .49400

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	3.5805
.018	1.5499
.020	.9068
.022	.2905
.025	.3021
.028	.3231
.030	.2813
.036	.7041
.039	1.1333
.041	1.2896
.044	1.3989
.049	1.2906
.058	1.0001
.068	.8907
.077	.8187
.085	.7876
.093	.7712
.106	.6314
.118	.5953
.131	.5021
.167	.2974
.185	.2378

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 558

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG113)

MACH (4) = 4.960 ALPHA (1) = -9.940 PO = 74 694 Q(PSI) = 2.5540 RN/L = 4.4400 P = .14800

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	3.5330
.018	1.4084
.020	.8935
.022	.2730
.025	.3129
.028	.3201
.030	.2678
.036	.6718
.039	1.1522
.041	1.3319
.044	1.4941
.049	1.2913
.058	.9804
.068	.8884
.077	.8193
.085	.7741
.093	.7551
.106	.6272
.118	.5.25
.131	.4946
.167	.3057
.185	.2523

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 559

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(RIG114) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ IN. XMRP = 0000 IN. XT
LREF = 330 2000 IN. YMRP = 0000 IN. YT
BREF = 330 2000 IN. ZMRP = 0000 IN. ZT
SCALE = 0091

PARAMETRIC DATA

BETA = .000 THETA = 180.000
PHI = .000

MACH (1) = 2.990 ALPHA (1) = -.040 PO = 60.015 Q(PSI) = 10.378 RN/L = 8 1200 P = 1.6590

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

016	.1867
018	.5380
.020	.8065
.022	.1024
.025	.1730
.028	.2225
.030	.2270
.036	.3280
.039	.6187
.041	.8375
.044	.8554
.049	.8241
.058	.7514
.068	.6262
.077	.5818
.085	.5319
.093	.5121
.106	.3847
.118	.3604
.131	.2814
.167	.1215
.185	.0783

MACH (2) = 4.000 ALPHA (1) = -.040 PO = 75.019 Q(PSI) = 5.5330 RN/L = 6.2000 P = .49400

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180 0000

X/L

016	.2679
018	.2632
.020	.6510
.022	.1120
.025	.1560
.028	.1595
.030	.1631
.036	.2406

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 560

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G114)

MACH (2) = 4.000 ALPHA (1) = -.040

SECTION (1)EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

Y/L

.039	.8935
.041	1.0983
.044	.9662
.049	.9173
.058	.6754
.068	.6160
.077	.5587
.085	.5111
.093	.4916
.106	.3769
.118	.3427
.131	.2742
.167	.1420
.185	.0896

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 561

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R16115) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330 2000 IN YMRP = 0000 IN YT
BREF = 330 2000 IN. ZMRP = 0000 IN. ZT
SCALE = 0091

BETA = 000 THETA = 180 000
PHI = 000

MACH (1) = 1.954 ALPHA (1) = 9.860 PO = 28.011 Q(PSI) = 10.275 RN/L = 7.0700 P = 3.8440

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 2.0579
018 1.6527
020 9583
022 5194
025 5527
028 5096
030 4067
036 7492
.039 1.2305
041 1.3940
044 1.5042
049 1.2757
058 1.0867
068 9451
077 .8849
085 .8282
093 8291
106 .6447
118 .6419
131 .5553
167 3077
185 .2277

MACH (2) = 2.990 ALPHA (1) = 9.880 PO = 60.015

Q(PSI) = 10.378 RN/L = 8.1000 P = 1.6590

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016 2.7300
018 1.7841
020 8729
022 1622
025 1890
.028 1.786
030 2725
036 8423

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 562

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G115)

MACH (2) = 2.990 ALPHA (1) = 9 880

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

039	1 1722
.041	1 2635
.044	1 2978
049	1 2720
058	9825
068	.8807
077	8583
085	.8039
093	7805
.106	6385
.118	6422
.131	.5222
167	3034
.185	.2371

MACH (3) = 4.000 ALPHA (1) = 9 880 PO = 75.019 Q(PS1) = 5.5330 RN/L = 6.1200 P = .49400

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

016	3 5192
018	1 6156
.020	8900
.022	2078
025	1364
028	1875
030	2175
036	9942
039	1 1571
.041	1 2927
044	1 3815
049	1 1787
058	9872
068	8942
077	8586
085	8103
093	7998
106	6440
118	6104
131	.5146
167	3112
185	2497

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 563

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10115)

MACH (4) = 4.960 ALPHA (1) = 9.860 PO = 74.994 O(PSI) = 2.5580 RN/L = 4.3500 P = 14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	3.4793
.018	1.4477
.020	.8777
.022	.3032
.025	.1673
.029	.2246
.030	.2322
.036	.6708
.039	1.1544
.041	1.3620
.044	1.4744
.049	1.1559
.058	.9824
.068	.9056
.077	.8550
.085	.8100
.093	.7815
.106	.6449
.118	.4576
.131	.5062
.167	.3154
.185	.2581

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 554

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10116) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ.IN. XMRP = 0000 IN XT
LREF = 330 2000 IN YMRP = .0000 IN YT
BREF = 330 2000 IN ZMRP = 0000 IN ZT
SCALE = .0091

BETA = 000 THETA = 180.000
PHI = 000

MACH (1) = 1.975 ALPHA (1) = -9.940 PO = 28.007 Q(PSI) = 10.160 RN/L = 6.9900 P = 3.7220

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.2066
.018	.2445
.020	.1945
.022	.2846
.025	.2876
.028	.3034
.030	.3083
.036	.3325
.039	.3624
.041	.3855
.044	.4037
.049	.4203
.058	.4297
.068	.4014
.077	.3819
.085	.3410
.093	.3116
.106	.2311
.118	.2078
.131	.1552
.167	-.0171
.185	-.0670

MACH (2) = 2.990 ALPHA (1) = -9.920 PO = 60.015 Q(PSI) = 10.378 RN/L = 8.2900 P = 1.6590

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.2419
.018	.2870
.020	.2255
.022	.1728
.025	.1551
.028	.1722
.030	.1808
.036	.2106

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 555

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R1G116)

MACH (2) = 2.990 ALPHA (1) = -9.920

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

039	.2497
041	.2758
044	.3053
.049	.3321
.058	.3552
.068	.3273
.077	.3183
.085	.2918
.093	.2766
.106	.1931
.118	.1241
.131	.1171
.167	.0108
.185	-.0178

MACH (3) = 4.000 ALPHA (1) = -9.960 PO = 75.003 O(PSI) = 5.5320 RN/L = 6.4200 P = .49400

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	.2394
.018	.3098
.020	.2217
.022	.1323
.025	.1225
.028	.1309
.030	.1366
.036	.1679
.039	.2224
.041	.2555
.044	.3014
.049	.3294
.058	.3646
.068	.3539
.077	.3273
.085	.2856
.093	.2581
.106	.1840
.118	.1436
.131	.1148
.167	.0373
.185	.0162

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 566

MSFC TWT 609 (TA3F) ET NOSE WITH NOSE CAP

(R10116)

MACH (4) = 4.960 ALPHA (1) = -9.960 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.1800 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000 .

X/L

.016	.2820
.018	.3462
.020	.2382
.022	.1526
.025	.1324
.028	.1324
.030	.1777
.036	.1777
.039	.2004
.041	.2394
.044	.2730
.049	.3093
.058	.3894
.068	.3697
.077	.3244
.085	.2941
.093	.2503
.106	.1944
.118	.2155
.131	.1505
.167	.1445
.185	.0825

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 567

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG117) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN. XMRP = 0000 IN. XT
LREF = 330 2000 IN. YMRP = 0000 IN. YT
SREF = 330.2000 IN. ZMPP = .0000 IN. ZT
SCALE = .0091

BETA = 000 THETA = .000
PHI = 000

MACH (1) = 597 ALPHA (1) = -5.040 PO = 22.014 Q(PSI) = 4 3220 RN/L = 4.9400 P = 17.292

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

016 1.0360
018 .5344
020 .5220
022 .4099
025 .4931
028 .7363
030 .8249
036 .8792
039 .8345
041 .7956
044 .7131
049 .6670
052 .5411
068 .4347
077 .3644
085 .3070
093 .2497
106 .1285
118 .0889
131 .0097
167 .2471
165 .3357

MACH (2) = .901 ALPHA (1) = -5.040 PO = 22.010 Q(PSI) = 6.4770 RN/L = 5.9100 P = 14.426

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

016 1.1111
018 .6138
020 .5715
022 .4783
025 .5565
028 .8130
030 .8928
036 .9584

ORIGINAL PAGE IS
OF POOR QUALITY

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 568

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG117)

MACH (2) = .801 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.9042
.041	8647
.044	7805
.049	7295
.058	.6027
.068	4944
.077	4104
.085	.3569
.093	3021
.106	.1613
.118	.1219
.131	0124
.167	- 2806
.185	-.3972

MACH (3) = .905 ALPHA (1) = -5.040 PO = 22.005 Q(PSI) = 7.4220 RN/L = 6.2500 P = 12.935

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.1655
.018	.6742
.020	6283
.022	5498
.025	6242
.028	.8483
.030	8926
.036	1 0167
.039	9641
.041	9254
.044	8400
.049	7847
.058	.6577
.068	5549
.077	4723
.085	4113
.093	.3626
.106	.2121
.118	.1712
.131	0671
.167	-.2449
.185	- 3633

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 569

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG117)

MACH (4) = 1.205 ALPHA (1) = -5.040 PO = 22.001 Q(PSI) = 9.1630 RN/L = 5.6400 P = 9.0090

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.3441
.018	.8959
.020	.8434
.022	.7739
.025	.8862
.028	.9700
.030	1.0269
.036	1.1900
.039	1.1570
.041	1.1194
.044	1.0402
.049	.9869
.058	.8693
.068	.7719
.077	.6955
.085	.6455
.093	.6010
.106	.4673
.118	.4356
.131	.3431
.167	.0875
.185	-.0159

MACH (5) = 1.462 ALPHA (1) = -5.040 PO = 21.993 Q(PSI) = 9.4680 RN/L = 6.4900 P = 6.3250

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.4049
.018	.8599
.020	.7034
.022	.6846
.025	.7263
.028	.6641
.030	.5740
.036	1.2394
.039	1.3385
.041	1.2375
.044	1.1234
.049	1.0492
.058	.9096
.068	.8088
.077	.7369

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 570

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R16117)

MACH (5) = 1.462 ALPHA (1) = -5.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.085	.6785
.093	.6425
.106	.5059
.118	.4829
.131	.3994
.167	.1452
.185	.0640

MACH (6) = 1.953 ALPHA (1) = -5.040 PO = 29.007 Q(PS1) = 10.279 RN/L = 7.0300 P = 3.8490

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.5469
.018	.9317
.020	.7059
.022	.4191
.025	.3868
.028	.3646
.030	.3239
.036	.6430
.039	1.0566
.041	1.2165
.044	1.1288
.049	1.0889
.058	.9304
.068	.8112
.077	.7164
.085	.7126
.093	.6162
.106	.5170
.118	.4978
.131	.4221
.167	.1971
.185	.1406

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R16117)

MACH (7) = 4.960 ALPHA (1) = -5.040 PO = 74.994 Q(PSI) = 2.5560 RN/L = 4.4700 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.7295
.018	1.0084
.020	.7809
.022	.2882
.025	.2868
.028	.2866
.030	.2837
.036	.3609
.039	.7038
.041	1.0323
.044	1.1506
.049	1.2874
.058	.8916
.068	.7694
.077	.6812
.085	.6360
.093	.6060
.106	.4997
.118	.4470
.131	.3806
.167	.2292
.185	.1824

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 572

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G11B) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ IN XMRP = .0000 IN XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = .000
PHI = .000

MACH (1) = .595 ALPHA (1) = -2.040 PO = 22.001 Q(PSI) = 4.2930 RN/L = 4.9200 P = 17.315

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .9875
.018 .8566
.020 .4866
.022 .5179
.025 .5250
.028 .4893
.030 .5260
.035 .7574
.039 .7819
.041 .7464
.044 .6647
.049 .6031
.058 .4640
.068 .3593
.077 .2816
.085 .2256
.093 .1764
.106 .0459
.118 .0151
.131 -.0757
.167 -.3050
.185 -.3783

MACH (2) = .802 ALPHA (1) = -2.040 PO = 22.005 Q(PSI) = 6.4870 RN/L = 5.9200 P = 14.406

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 1.0718
.018 .7372
.020 .5461
.022 .5812
.025 .6002
.028 .5568
.030 .5848
.035 .8004

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G118)

MACH (2) = .802 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.8485
.041	.8211
.044	.7384
.049	.6686
.058	.5300
.068	.4173
.077	.3321
.085	.2747
.093	.2237
.106	.0739
.118	.0431
.131	-.0646
.167	-.3497
.185	-.4578

MACH (3) = .908 ALPHA (1) = -2.040 PC = 22.001 Q(PSI) = 7.4390 RN/L = 6.2500 P = 12.900

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.1261
.018	.7867
.020	.6031
.022	.6322
.025	.6575
.028	.6239
.030	.6363
.036	.8456
.039	.8934
.041	.8737
.044	.7930
.049	.7267
.058	.5849
.068	.4746
.077	.3923
.085	.3289
.093	.2786
.106	.1300
.118	.0911
.131	-.0158
.167	-.3103
.185	-.4384

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG118)

MACH (4) = 1.207 ALPHA (1) = -2.040 PO = 22.005 Q(PS1) = 9.1700 RN/L = 6.6400 P = 8.9910

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.3020
.018	.9895
.020	.7904
.022	.8252
.025	.8541
.028	.8284
.030	.8438
.036	1.0393
.039	1.0815
.041	1.0628
.044	.9891
.049	.9292
.058	.7970
.068	.6951
.077	.6209
.085	.5658
.093	.5235
.106	.3910
.118	.3591
.131	.2716
.167	.0207
.185	-.0758

MACH (5) = 1.465 ALPHA (1) = -2.040 PO = 21.989 Q(PS1) = 9.4640 RN/L = 6.4700 P = 6.3030

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.3597
.018	.9553
.020	.6299
.022	.7292
.025	.6883
.028	.6621
.030	.6127
.036	.8907
.039	1.1770
.041	1.2301
.044	1.0955
.049	.9972
.058	.8432
.068	.7361
.077	.6609

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG118)

MACH (5) = 1.465 ALPHA (1) = -2.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.6058
.093	.5705
.106	.4321
.118	.4207
.131	.3301
.167	.0897
.185	.0100

MACH (6) = 1.949 ALPHA (1) = -2.040 PO = 28.011 Q(PSI) = 10.305 RN/L = 7.0400 P = 3.8770

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.5077
.018	1.0362
.020	.6020
.022	.4556
.025	.4175
.028	.3926
.030	.3734
.036	.4993
.039	.6463
.041	.9357
.044	1.0141
.049	.9747
.050	.8820
.060	.7453
.077	.6793
.085	.6373
.093	.6007
.106	.4519
.118	.4433
.131	.3552
.167	.1588
.185	.0886

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G118)

MACH (7) = 4.960 ALPHA (1) = -2 040 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.3000 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.6714
.018	1.1034
.020	.6933
.022	.3380
.025	.3018
.028	.3047
.030	.3319
.036	.3109
.039	.3213
.041	.5375
.044	.8372
.049	1.0304
.058	.8127
.068	.6935
.077	.6026
.085	.5617
.093	.5181
.106	.4257
.118	.4771
.131	.3185
.167	.2397
.185	.1415

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG119) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ IN XMRP = , 0000 IN XT
LREF = 330 2000 IN. YMRP = , 0000 IN. YT
BREF = 330 2000 IN ZMRP = , 0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = .000
PHI = .000

MACH (1) = .595 ALPHA (1) = -.040 PO = 22.001 Q(PSI) = 4.2930 RN/L = 4.9200 P = 17.315

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 .9556
.018 .7151
.020 .4379
.022 .5305
.025 .4956
.028 .4811
.030 .4269
.036 .6744
.039 .8013
.041 .7701
.044 .6428
.049 .5557
.058 .4088
.068 .3033
.077 .2193
.085 .1674
.093 .1209
.106 .0144
.118 -.0351
.131 -.1255
.167 -.3414
.185 -.4100

MACH (2) = .802 ALPHA (1) = -.020 PO = 21.997 Q(PSI) = 6.4880 RN/L = 5.9200 P = 14.396

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.0354
.018 .7885
.020 .5028
.022 .5921
.025 .5561
.028 .5493
.030 .4978
.036 .7211

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG119)

MACH (2) = .802 ALPHA (1) = -.020

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.8557
.041	.8427
.044	.7140
.049	.6292
.058	.4716
.068	.3583
.077	.2739
.085	.2144
.093	.1665
.106	.0151
.118	-.0163
.131	-.1164
.167	-.4018
.185	-.4983

MACH (3) = .907 ALPHA (1) = -.030 PO = 22.010 Q(PSI) = 7.4360 RN/L = 6.2600 P = 12.915

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.0891
.018	.3411
.020	.5577
.022	.6409
.025	.6036
.028	.6029
.030	.5452
.036	.7675
.039	.9105
.041	.8952
.044	.7675
.049	.6827
.058	.5270
.068	.4106
.077	.3331
.085	.2686
.093	.2191
.106	.0701
.118	.0351
.131	-.0720
.167	-.3563
.185	-.4900

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G119)

MACH (4) = 1.197 ALPHA (1) = - 030 PO = 21.997 Q(PSI) = 9.1320 RN/L = 6.6400 P = 9.1110

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

016	1.2670
018	1.0352
020	.7575
.022	.8362
025	.8064
030	.8062
030	.7769
036	.9411
039	1.0667
041	1.0740
044	.9678
.049	.8884
058	.7451
068	.6407
077	.5668
.085	.5135
093	.4738
106	.3372
.118	.3111
131	.2271
167	- .0211
185	- .1147

MACH (5) = 1.464 ALPHA (1) = -.040 PO = 21.997 Q(PSI) = 9.4680 RN/L = 6.4800 P = 6.3100

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

016	1.3299
018	1.0071
020	.6226
022	.7410
025	.7148
028	.6940
030	.6818
036	.7230
039	.8202
041	.9889
044	1.0353
049	.9775
058	.8039
068	.6991
077	.6111

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R16119)

MACH (5) = 1.454 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.5540
.093	.5239
.106	.3808
.118	.3743
.131	.2823
.167	.0504
.185	-.0230

MACH (6) = 1.968 ALPHA (1) = -.040 PO = 28.011 Q(PSI) = 10.199 RN/L = 6.9800 P = 3.7620

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.4595
.018	1.0592
.020	.5422
.022	.4317
.025	.4156
.028	.3838
.030	.3748
.035	.3974
.039	.4634
.041	.6578
.044	.7928
.049	.8494
.058	.7538
.058	.6987
.077	.5950
.075	.5835
.093	.5347
.106	.4005
.118	.3798
.131	.2975
.167	.1032
.185	.0558

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G119)

MACH (7) = 2 990 ALPHA (1) = -.040 PO = 60.015 Q(PS1) = 10 378 RN/L = 8.0700 P = 1.6590

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.5583
.018	1.1295
.020	.6146
.022	.2805
.025	.2989
.028	.2918
.030	.2866
.036	.2833
.039	.4178
.041	.5993
.044	.7212
.049	.7853
.058	.7436
.068	.6377
.077	.5591
.085	.5334
.093	.4972
.106	.3854
.118	.3586
.131	.2807
.167	.1238
.185	.0757

MACH (8) = 4 000 ALPHA (1) = -.040 PO = 74.986 Q(PS1) = 5.5310 RN/L = 6.3700 P = .49400

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.6203
.018	1.1639
.020	.6316
.022	.2457
.025	.2631
.028	.2617
.030	.2583
.036	.2540
.039	.3309
.041	.6144
.044	.7281
.049	.8274
.058	.8256
.068	.6393
.077	.5589

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG119)

MACH (8) = 4.000 ALPHA (1) = -.040

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.5192
.093	.4855
.106	.3820
.118	.3402
.131	.2799
.167	.1359
.185	.0950

MACH (9) = 4.960 ALPHA (1) = -.040 PO = 75.003 Q(PSI) = 2.5580 RN/L = 4.2000 P = .14900

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.6281
.018	1.1680
.020	.6406
.022	.3502
.025	.3153
.028	.3169
.030	.3472
.036	.3183
.039	.3200
.041	.3684
.044	.5254
.049	.8115
.058	.8584
.068	.6449
.077	.5589
.085	.5151
.093	.4650
.106	.3789
.118	5.0521
.131	.3289
.167	.2338
.185	.1172

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG120) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633.5996 SQ IN XMRP = .0000 IN XT
LREF = 330 2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = .000 THETA = .000
PHI = .000

MACH (1) = 595 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 4.2940 RN/L = 4.9300 P = 17.317

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 9155
.018 7737
.020 4149
.022 5692
.025 .4962
.028 .4952
.030 .4937
.036 .4998
.039 .5358
.041 5971
.044 5881
.049 5250
.058 3614
.068 2512
.077 1650
.085 1132
.093 .0675
.106 -.0640
.118 -.0864
.131 -.1721
.167 -.3796
.185 -.4396

MACH (2) = .801 ALPHA (1) = 1.960 PO = 22.001 Q(PSI) = 6.4790 RN/L = 5.9200 P = 14.414

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016 .9984
.018 .8466
.020 .4801
.022 .6263
.025 .5547
.028 .5582
.030 .5578
.036 .5649

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG120)

MACH (2) = .801 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	6036
.041	6699
.044	.6576
.049	5923
.058	4284
.068	3054
.077	.2199
.085	1607
.093	1104
.106	-.0401
.118	-.0688
.131	~ 1700
.167	~ 4444
.185	~ 5372

MACH (3) = 906 ALPHA (1) = 1.990 PO = 22 010 Q(PSI) = 7.4320 RN/L = 6.2600 P = 12 923

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.0535
.018	.8962
.020	5327
.022	.6749
.025	.6077
.028	.6092
.030	6087
.036	6202
.039	.6618
.041	7285
.044	7163
.049	6473
.058	.4837
.068	3630
.077	.2743
.085	.2139
.093	1671
.106	.0133
.118	-.0194
.131	~ 1197
.167	~ 4069
.185	-.5245

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R10120)

MACH (4) = 1.194 ALPHA (1) = 1.960 PO = 22.005 Q(PSI) = 9.1280 RN/L = 6.6500 P = 9.1410

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

016 1.2309
018 1.0870
020 .7336
022 .9668
025 .8052
028 .8086
030 .8041
036 .8285
039 .8844
041 .9334
044 .9111
049 .8522
058 .7011
068 .5946
077 .5179
085 .4629
093 .4259
106 .2912
118 .2620
131 .1836
167 -.0625
185 -.1507

MACH (5) = 1.458 ALPHA (1) = 1.960 PO = 22.010 Q(PSI) = 9.4770 RN/L = 6.5000 P = 6.3680

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

016 1.2948
018 1.0540
020 .6311
025 .7217
028 .7185
030 .7111
036 .7123
039 .7335
041 .7935
044 .8552
049 .8853
058 .7674
068 .6437
077 .5602

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R10120)

MACH (5) = 1.458 ALPHA (1) = 1.960

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.085	.5037
.093	.4756
.106	.3403
.118	.3674
.131	.2339
.167	.0106
.185	-.0140

MACH (6) = 1.964 ALPHA (1) = 1.960 PO = 28.003 Q(PSI) = 10.218 RN/L = 7.0000 P = 3.7840

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.4217
.018	1.1260
.020	.4900
.022	.4352
.025	.4257
.028	.4101
.030	.4000
.036	.3981
.039	.4241
.041	.5325
.044	.6448
.049	.7300
.058	.7052
.068	.6062
.077	.5615
.085	.5359
.093	.4927
.106	.3669
.118	.3402
.131	.2638
.167	.0777
.185	.0281

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG120)

MACH (7) = 4.960 ALPHA (1) = 1.960 PO = 75.003 Q(PSI) = 2.5580 RN/L = 4.4000 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.5727
.018	1.2118
.020	.5920
.022	.3095
.025	.3229
.028	.3244
.030	.3231
.035	.3229
.039	.3289
.041	.3095
.044	.3516
.049	.5693
.053	.7270
.058	.6479
.077	.5179
.085	.4608
.093	.4226
.106	.3334
.118	.2868
.131	.2352
.167	.1506
.185	.1157

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 588

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R16121) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ. IN. XMRP = 0000 IN. XT
LREF = 330.2000 IN YMRP = .0000 IN. YT
BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
SCALE = 0091

ETA = 000 THETA = .000
PHI = 000

MACH (1) = 595 ALPHA (1) = 4.960 PO = 22 010 Q(PSI) = 4.2930 RN/L = 4.9300 P = 17.322

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

016 .8439
018 .8179
020 .3734
022 .3836
025 .4625
.028 .4302
.030 .4206
036 .4625
039 .4636
.041 .4683
044 .4346
.049 .4023
058 .2800
058 .1700
.077 .0875
085 .0359
093 - .0080
106 - .1371
.119 - .1567
131 - .2366
.167 - .4234
185 - .4724

MACH (2) = .798 ALPHA (1) = 4.980 PO = 22.010 Q(PSI) = 6.4500 RN/L = 5.9200 P = 14.466

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

016 .9300
018 .8879
020 .4350
022 .4146
025 .5416
028 .4968
030 .4782
036 .5260

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R16121)

MACH (2) = .798 ALPHA (1) = 4.980

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.039	.5340
.041	.5388
.044	.5075
.049	.4740
.058	.3408
.068	.2265
.077	.1374
.085	.0774
.093	.0299
.106	-.1181
.118	-.1469
.131	-.2414
.167	-.5027
.185	-.5799

MACH (3) = .898 ALPHA (1) = 4.960 PO = 22.001 Q(PSI) = 7.3550 RN/L = 6.2500 P = 13.043

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	.9803
.018	.9725
.020	.4799
.022	.7154
.025	.5654
.028	.5472
.030	.5512
.036	.5665
.039	.5819
.041	.5991
.044	.5844
.049	.5388
.058	.3958
.068	.2797
.077	.1890
.085	.1252
.093	.0822
.106	-.0396
.118	-.1033
.131	-.1977
.167	-.4761
.185	-.5874

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G121)

MACH (4) = 1.199 ALPHA (1) = 4.960 PO = 22.001 Q(PSI) = 9.1420 RN/L = 6.6700 P = 9.0840

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.1727
.018	1.1628
.020	.6921
.022	.9092
.025	.7745
.028	.7666
.030	.7701
.036	.7821
.039	.8051
.041	.8200
.044	.8011
.049	.7636
.058	.6347
.068	.5262
.077	.4508
.085	.3970
.093	.3574
.106	.2264
.118	.1991
.131	.1167
.167	-.1117
.185	-.1950

MACH (5) = 1.457 ALPHA (1) = 4.960 PO = 21.997 Q(PSI) = 9.4720 RN/L = 6.5000 P = 6.3700

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 0000

X/L

.016	1.2413
.018	1.1424
.020	.6188
.022	.8307
.025	.6833
.028	.6735
.030	.6776
.036	.6878
.039	.6984
.041	.7225
.044	.7446
.049	.7589
.058	.6829
.068	.5751
.077	.4930

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 591

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G121)

MACH (5) = 1.457 ALPHA (1) = 4.960

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 0000

X/L

085 4364
093 4027
106 2843
118 3258
.131 1756
167 - 0366
185 - 0845

MACH (6) = 1.963 ALPHA (1) = 4.960 PO = 28.011 - Q(PSI) = 10.225 RN/L = 7.0100 P = 3.7890

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.3617
.018 1.1995
.020 .4136
022 .4454
.025 .4059
.028 .3981
030 .3890
.036 .4090
039 .4095
041 .4363
.044 .4990
.049 .5759
058 .5930
068 .5379
.077 .4734
085 .4522
.093 .4358
106 .3096
118 .2857
.131 .2233
167 .0429
185 -.0077

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 592

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R16121)

MACH (7) = 4.960 ALPHA (1) = 4.960 PO = 75.019 Q(PS1) = 2.5580 RN/L = 4.2300 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.5142
.018	1.3146
.020	.5239
.022	.2956
.025	.2941
.028	.2941
.030	.3213
.036	.2972
.039	.2956
.041	.3244
.044	.2926
.049	.3607
.058	.5572
.068	.5360
.077	.4680
.085	.4075
.093	.3561
.106	.2775
.118	4.4623
.131	.2488
.167	.1944
.185	.0810

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G122) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ. IN. XMRP = .0000 IN. XT
LREF = 330 2000 IN YMRP = .0000 IN. YT
SREF = 330.2000 IN ZMRP = .0000 IN ZT
SCALE = .0091

BETA = .000 THETA = .000
PHI = .000

MACH (1) = 1.966 ALPHA (1) = 9.860 PO = 28.003 Q(PST) = 10.209 RN/L = 7.0000 P = 3.7740

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

T-ETA 0000

X/L

016 1.2340
018 .7836
020 3064
022 3526
.025 3374
.028 3356
030 .3338
036 3423
039 .3520
041 3668
044 .3965
049 .4297
058 4365
068 3942
077 3478
085 3319
093 .3041
106 2135
118 1899
131 1421
157 - 0112
195 -.0585

MACH (2) = 2.990 ALPHA (1) = 9.860 PO = 60.015 Q(PST) = 10.378 RN/L = 8.2100 P = 1.6590

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

T-ETA 0000

X/L

016 1.3224
018 8032
020 3515
022 .2102
025 2441
028 2315
030 .2233
036 2270

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G122)

MACH (2) = 2.990 ALPHA (1) = 9.860

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	.2345
.041	.2512
.044	.2799
.049	.3209
.058	.3615
.068	.3351
.077	.3004
.085	.2851
.093	.2620
.106	.1920
.118	.1625
.131	.1152
.167	.0142
.185	-.0152

MACH (3) = 4.000 ALPHA (1) = 9.860 ρ_0 = 74.996 Q(PS1) = 5.5310 RN/L = 6.3500 P = .49400

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.3831
.018	.9368
.020	.5918
.022	.1947
.025	.1960
.028	.1953
.030	.1905
.036	.1939
.039	.1939
.041	.1884
.044	.2379
.049	.3120
.058	.3632
.068	.3498
.077	.3176
.085	.2954
.093	.2715
.106	.1804
.118	.2408
.131	.1197
.167	.0401
.185	.0162

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TNT 609 (TA3F)

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MSFC TNT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R10122)

MACH (4) = 4.960 ALPHA (1) = 9.860 PO = 75.011 Q(PSI) = 2.5580 RN/L = 4.1400 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.3902
.018	.8572
.020	.4136
.022	.2596
.025	.2292
.028	.2276
.030	.2352
.036	.2217
.039	.2337
.041	.2321
.044	.2247
.049	.2321
.058	.3697
.068	.3684
.077	.3365
.085	.3047
.093	.2716
.106	.2049
.118	.6948
.131	.1536
.167	.1036
.185	.0644

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R10123) (28 AUG 75)

REFERENCE DATA

SREF = 85633.5996 SQ. IN. XMRP = 0000 IN. XT
 LREF = 330.2000 IN. YMRP = .0000 IN. YT
 BREF = 330.2000 IN. ZMRP = .0000 IN. ZT
 SCALE = .0091

PARAMETRIC DATA

BETA = .000 THETA = .000
 PHI = .000

MACH (1) = 1.966 ALPHA (1) = -9.940 PO = 28.003 Q(PS1) = 10.206 RN/L = 7.0100 P = 3.7720

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.6011
 .018 1.3335
 .020 .8290
 .022 .5273
 .025 .5153
 .028 .4987
 .030 .4380
 .036 .9245
 .039 1.2750
 .041 1.3685
 .044 1.3211
 .049 1.2439
 .058 1.0434
 .068 .9051
 .077 .8393
 .085 .8154
 .093 .7869
 .106 .6284
 .118 .6214
 .131 .5308
 .167 .3115
 .185 .2160

MACH (2) = 2.990 ALPHA (1) = -9.940 PO = 59.999 Q(PS1) = 10.376 RN/L = 8.2000 P = 1.6580

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016 1.7100
 .018 1.4114
 .020 .9079
 .022 .3615
 .025 .3715
 .028 .3787
 .030 .3323
 .036 .7175

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G123)

MACH (2) = 2.990 ALPHA (1) = -9.940

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.039	1.1386
.041	1.3334
.044	1.3405
.049	1.4096
.058	.9929
.068	.9342
.077	.8203
.085	.7961
.093	.7719
.106	.6403
.118	.6242
.131	.5303
.167	.3062
.185	.2380

MACH (3) = 4.000 ALPHA (1) = -9.960 PO = 75.003 Q(PSI) = 5.5320 RN/L = 6.1000 P = .49400

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.7813
.018	1.4585
.020	.9414
.022	.3215
.025	.3470
.028	.3491
.030	.2728
.036	.6904
.039	1.1573
.041	1.3822
.044	1.4868
.049	1.3750
.058	1.0040
.068	.8990
.077	.8267
.085	.8131
.093	.7932
.106	.6463
.118	.6482
.131	.5204
.167	.3140
.185	.2512

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G123)

MACH (4) = 4.960 ALPHA (1) = -9.940 PO = 75.019 Q(PSI) = 2.5580 RN/L = 4.3500 P = .14900

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA .0000

X/L

.016	1.7803
.018	1.4804
.020	.9276
.022	.2792
.025	.3410
.028	.3455
.031	.2926
.036	.6131
.039	1.1574
.041	1.4265
.044	1.6125
.049	1.3343
.058	.9835
.068	.8928
.077	.8233
.085	.7961
.093	.7719
.106	.6403
.118	.5920
.131	.5118
.167	.3168
.185	.2609

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 599

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG124) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ.IN XMRP = 0000 IN. XT
LREF = 330.2000 IN. YMRP = .0000 IN. YT
BREF = 330 2000 IN. ZMRP = .0000 IN. ZT
SCALE = .0091

BEIA = 000 THETA = 180 000
PHI = 000

MACH (1) = 2 990 ALPHA (1) = - 040 PO = 60 032 Q(PSI) = 10 381 RN/L = 8.1000 P = 1.6590

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

016 1 5553
018 1 1245
020 6135
022 3012
025 2835
029 2773
030 2529
036 2686
039 4137
041 5852
044 .6962
049 .7659
058 .7350
068 .6400
077 .5647
085 .5375
093 .5036
106 .3895
118 .3643
131 .2831
157 .1236
185 .0771

MACH (2) = 4 000 ALPHA (1) = - 040 PO = 74.994 Q(PSI) = 5.5310 RN/L = 6.1300 P = 49400

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180 0000

X/L

016 1 6098
018 1 1519
020 6176
022 2576
025 2493
028 2481
030 2478
036 2437

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 60" (TA3F)

PAGE 600

MACH (2) = 4.000 ALPHA (1) = -.040

(R10124)

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.039	.2858
.041	.5570
.044	.7056
.049	.8076
.058	.8130
.068	.6279
.077	.5527
.085	.5150
.093	.4824
.106	.3766
.118	.3395
.131	.2724
.167	.1359
.185	.0870

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

PAGE 601

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(RIG125) (28 AUG 75)

REFERENCE DATA

SREF = 85633 5996 SQ IN XMRP = 0000 IN XT
LREF = 330 2000 IN YMRP = 0000 IN YT
BPEF = 330 2000 IN ZMRP = 0000 IN ZT
SCALE = .0091

PARAMETRIC DATA

BETA = 000 THETA = 180.000
PHI = .000

MACH (1) = 1.957 ALPHA (1) = 9 860 PG = 28.015 Q(PS1) = 10 260 RN/L = 7 0300 P = 3.8270

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 1 5836
.018 1 3115
.020 .8480
.022 4990
.025 5775
.028 5479
.030 4550
.035 .7293
.039 1 0934
.041 1 3619
.044 1.3859
.049 1 3113
.058 1 0867
.068 9324
.077 .8491
.085 8254
.093 9189
.106 6389
.118 6361
.131 5420
.167 .3097
.185 .2256

MACH (2) = 2.990 ALPHA (1) = 9 860 PO = 60.024 Q(PS1) = 10 380 RN/L = 8.0700 P = 1.6590

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016 1 7092
.018 1 4081
.020 9041
.022 2311
.025 3123
.028 2946
.030 2482
.036 6959

MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G125)

MACH (2) = 2.990 ALPHA (1) = 9.860

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.039	1.0934
.041	1.2914
.044	1.3525
.049	1.3601
.058	.9914
.068	.8945
.077	.8341
.085	.8133
.093	.7719
.106	.6411
.118	.6254
.131	.5237
.167	.3030
.185	.2333

MACH (3) = 4.000 ALPHA (1) = 9.860 PO = 74.969 Q(PST) = 5.5300 RN/L = 6.0600 P = 49400

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.7756
.018	1.4568
.020	.9341
.022	.2345
.025	.2380
.028	.2485
.030	.2233
.036	.8508
.039	1.1628
.041	1.3440
.044	1.4216
.049	1.2439
.058	.9886
.068	.8921
.077	.8333
.085	.8137
.093	.7823
.106	.6417
.118	.6074
.131	.5094
.167	.3059
.185	.2422

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G125)

MACH (4) = 4.960 ALPHA (1) = 9.860 PO = 74.969 Q(PSI) = 2.5570 RN/L = 4.1600 P = .14800

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.016	1.7891
.018	1.4512
.020	.9237
.022	.2594
.025	.2248
.028	.2641
.030	.2732
.036	.5682
.039	1.2187
.041	1.4744
.044	1.5833
.049	1.1809
.058	.9873
.068	.9343
.077	.8556
.085	.8103
.093	.7770
.106	.6590
.118	.5969
.131	.5077
.167	.3186
.185	.2384

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DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R1G126) (28 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF = 85633 5996 SQ. IN. XMRP = 0000 IN XT
LREF = 330 2000 IN. YMRP = 0000 IN. YT
BREF = 330 2000 IN ZMRP = .0000 IN. ZT
SCALE = 0091

BETA = 000 THETA = 180.000
PHI = .000

MACH (1) = 1 958 ALPHA (1) = -9.940 PO = 28.007 Q(PSI) = 10.254 RN/L = 7.0300 P = 3.8220

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016 1.2438
018 7688
020 3058
022 3406
025 3505
.028 3428
.030 3386
036 .3562
039 3805
.041 4020
.044 4225
049 4435
.058 4417
068 .4078
077 .3613
.085 .3360
.093 .3102
106 .2338
118 .2194
131 .1401
.167 -.0129
185 -.0615

MACH (2) = 2 990 ALPHA (1) = -9.940 PO = 60 015 Q(PSI) = 10.378 RN/L = 8.2200 P = 1.6590

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

016 1.3216
018 .7943
020 3492
022 .2510
025 .2419
028 .2348
.030 2270
036 2330

DATE 30 OCT 75

TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R10126)

MACH (2) = 2.990 ALPHA (1) = -9.940

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.039	.2617
.041	.2911
.044	.3164
.049	.3377
.058	.3511
.068	.3287
.077	.2948
.085	.2781
.093	.2546
.106	.1894
.118	.1603
.131	.1144
.167	.0153
.185	-.0152

MACH (3) = 4.000 ALPHA (1) = -9.960 PO = 74.903 Q(PS1) = 5.5250 RN/L = 6.3100 P = .49300

SECTION (1) EXTERNAL TANK NOSE DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.015	1.3754
.018	.8309
.020	.3828
.022	.2105
.025	.2025
.028	.1968
.030	.2002
.036	.2067
.039	.2184
.041	.2283
.044	.2906
.049	.3262
.058	.3496
.068	.3354
.077	.3031
.085	.2914
.093	.2493
.106	.1814
.118	.1512
.131	.1101
.167	.0158
.185	.0135

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TABULATED SOURCE DATA, MSFC TWT 609 (TA3F)

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MSFC TWT 609 (TA3F) ET NOSE W/O LIGHTNING ROD

(R10126)

MACH (4) = 4.960 ALPHA (1) = -9.960 PO = 74.969 Q(PSI) = 2.5570 RN/L = 4.3100 P = .14800

SECTION (1) EXTERNAL TANK NOSE

DEPENDENT VARIABLE CP

THETA 180.0000

X/L

.015	1.4048
.019	.8611
.020	.4184
.022	.2261
.025	.2248
.028	.2248
.030	.2354
.036	.2323
.039	.2399
.041	.2490
.044	.2429
.049	.2626
.058	.3337
.068	.3473
.077	.3277
.085	.2913
.093	.2596
.106	.1945
.118	.1885
.131	.1491
.157	.1249
.185	.0977